MassDEP

Drinking Water Program
One Winter Street – 5th Floor; Boston, MA 02108
Program.Director-DWP@mass.gov or 617-292-5770

Drinking Water Program Updates 2019-11-22

This week's program director email has these topics of interest:

1. Proposed LCR Revision
2. Notice of Grant Opportunity
3. DPL Moving to Online Operator License Renewals
4. Water Leak Detection Canine
5. Training Calendar
6. Spam

Proposed LCR Revision

The proposed Lead and Copper Rule Revisions (LCRR) are now published in the (11/13) *Federal Register.* Stakeholders and agencies are encouraged to submit their comments to EPA. Comments are due to EPA by January 13, 2020 and can be submitted at regulations.gov. The Association of State Drinking Water Administrators (ASDWA) requested a 30-day extension to the comment period due the complexity of the proposed revisions and potential impacts to primacy agencies from implementing the LCRR in the future.

Two other documents are also attached; one shows the difference between the current rule versus the proposed rule in a side-by-side comparison chart, and the second is the Proposed LCR Requests for Comment.

Notice of Grant Opportunity

Water Quality Monitoring Grant Program
Request for Grant Proposals

The Massachusetts Department of Environmental Prote
Resources, Watershed Planning Program (WPP) is excited to offer the Water Quality Monitoring Grants Program for a second year.

With more than 3,000 lakes and ponds and 12,000 miles of streams and rivers in the state, MassDEP's WPP can sample just a small fraction of these surface waters in any given year. MassDEP's goal in presenting this grant opportunity is to supplement its own surface water quality dataset ("internal dataset") with data collected by groups outside of the agency ("external dataset"). To help meet this goal, MassDEP is soliciting grant proposals for the collection of bacteria data in surface waters during the 2020 summer sampling season (i.e., from April 1st to October 15th). This external dataset will enhance the amount and spatial coverage of data that MassDEP's WPP can use in the assessment of primary and secondary contact recreation activities in surface waters of the Commonwealth.

The Water Quality Monitoring Grant Program Request for Grant Proposals document summarizes the proposal and qualification requirements, identifies a specific format for responding to this Grant Opportunity, and outlines the grant application schedule. The Water Quality Monitoring Grant Program Request for Grant Proposals document can be found at the following MassDEP website: https://www.mass.gov/info-details/grants-financial-assistance-watersheds-water-quality.

Important dates for applicants:
Written questions can be submitted to the Grant Program Manager at meghan.selby@mass.gov until **12:00 p.m. on December 4, 2019**.

Grant applications must be received by the Grant Program Manager by **12:00 p.m. on December 20, 2019**.

DPL Moving to Online Operator License Renewals

Starting with the upcoming renewal cycle (ending 12/31/2019), the Division of Professional Licensure (DPL) is moving to online license renewals for drinking water operators.
This follows a successful online renewal process for other licensing boards within the agency.

Operators will get an insert in the mail along with their renewal notification that describes the process (see attached example of the mail you will receive). To assist operators with this transition, DPL staff will be attending a number of operator trainings and events over the next few months to answer questions and help with renewals.

To begin the online renewal process, please visit https://elicensing.mass.gov/CitizenAccess which will bring you directly to the ePLACE Portal.

Use email for all your operator license questions

- For online renewal, Record ID, or Authorization Code email DPLauthcodes@mass.gov.
- For renewal eligibility and any other operator related issues email drinkingwaterboard@mass.gov.

If you would like to share your operator license questions with MassDEP please cc program.director-dwp@mass.gov .

Water Leak Detection Canine: Arkansas Introduces First Leak Detection Dog in the Nation

Finding a water leak can sometimes be a little tricky. But for Vessel, a black lab mix and recent

graduate of the Arkansas Department of Corrections Paws in Prison Program, it's a regular day for her to sniff out and detect leaks.
Central Arkansas Water (CAW) introduced Vessel to the public Tuesday, November 19, at the River Market Pavilion in Little Rock, Arkansas. She will be working with a handler who is employed at CAW, and her job will be to detect surfacing and non-surfacing leaks in the water system. She also can tell the difference between ground water and treated water.

"It's not the water that she's smelling, it's all the chemicals," explained Carrie Kessler, dog trainer. "When there's a leak, that water might come to the surface, but it usually goes down. But what comes up are the gases, and that's what she smells. That's what she identifies and that's what she can tell us."

Commonly in the U.S. leak detection canines are used to detect leaks in oil pipelines. CAW is the first water utility in the country to employ a water leak detection dog.

If you want to keep up with the amazing things Vessel will be doing you can follow her on Facebook, Twitter and Instagram.

There are always new advancements and technologies introduced to the water and wastewater industry, this one just happens to have a tail and puppy dog eyes.

Training Calendar

When you need training please look at the training calendar located at: mass.gov/eea/agencies/massdep/water/drinking/drinking-water-training-class-schedules.html for upcoming trainings.

If you need a refresher on recently given trainings, you can review several training videos located at: youtube.com/playlist?list=PLJn2AKOcYr7lutGJB-UfDKtQPF_o_249m

Or click here:

Spam

Please be reminded that official emails from MassDEP will never come from a Hotmail or any other personal account. If you receive an email of this nature, the email is spam. Do not click on the links, and delete it immediately. To safeguard yourself only click open emails that have XXXXX.XXXX@mass.gov.

This MassDEP Program Director technical assistance email is funded by the Safe Drinking Water Act Assessment (Section 70) Program. The Assessment is paid by all consumers of public water in Massachusetts and is collected by public water systems. For more information about the Assessment Program, go to mass.gov/eea/agencies/massdep/news/advisory-committees/safe-drinking-water-act-assessment-advisory-committee.html.

Lead and Copper Rule STR/LTR Side-by-Side

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Definitions				
Action Level - *Action level,* is the concentration of lead or copper in water specified in §141.80(c) which determines, in some cases, the treatment requirements contained in subpart I of this part that a water system is required to complete.	§141.2		Action level means the concentrations of lead or copper in water as specified in § 141.80(c) which determines, in some cases, the treatment, lead service line replacement, and tap sampling requirements that a water system is required to complete. The action level for lead is 0.015 mg/L and the action level for copper is 1.3 mg/L.	
			Aerator means the device embedded in the water faucet to enhance air flow with the water stream and to prevent splashing.	
			Child care facility means a location that houses a licensed provider of child care, day care or early learning services to children, as determined by the State, local, or tribal licensing agency.	
			Consumer means customers and other users of a public water system	
Corrosion Inhibitor - *Corrosion inhibitor* means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.	§141.2			
			Customer means a paying user of a public water system.	
Effective Corrosion Inhibitor Residual - *Effective corrosion inhibitor residual,* for the purpose of subpart I of this part only, means a concentration sufficient to form a passivating film on the interior walls of a pipe.	§141.2			
			Find-and-Fix means the requirement in 141.82(j) that water systems must perform at every sampling site that yielded a lead result above the action level (0.015 mg/L). Follow-up sampling results must be provided to the consumer in accordance with § 141.85(d).	
First Draw Sample – *First draw sample* means a one-liter sample of tap water, collected in accordance with §141.86(b)(2), that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.	§141.2		First-draw sample means a one-liter sample of tap water, collected in accordance with § 141.86(b)(2).,	
			Galvanized service line generally means iron or steel piping that has been dipped in zinc to prevent corrosion and rusting.	
			Gooseneck, pigtail or connector is a short section of piping, usually one to two feet long, which can be bent and used for connections between rigid service piping.	
			Hydrovacing means an alternative method to digging up a lead service line to identify it using high-pressure water and a vacuum system to dig a hole.	
Large Water System – *Large water system,* for the purpose of subpart I of this part only, means a water system that serves more than 50,000 persons.	§141.2			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Lead Service Line – *Lead service line* means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line	§141.2		Lead service line means a service line made of lead, which connects the water main to the building inlet. A lead service line may be owned by the water system, owned by the property owner, or both. For the purposes of this subpart, a galvanized service line is considered a lead service line if it ever was or is currently downstream of any lead service line or service line of unknown material. If the only lead piping serving the home or building is a lead gooseneck, pigtail, or connector, and it is not a galvanized service line that is considered an LSL the service line is not a lead service line.	
Maximum Contaminant Level – *Maximum contaminant level* means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.	§141.2			
Maximum contaminant level goal or MCLG - *Maximum contaminant level goal* or *MCLG* means the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. Maximum contaminant level goals are non-enforceable health goals.	§141.2			
Medium-sized Water System – *Medium-size water system,* for the purpose of subpart I of this part only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.	§141.2		Medium-size water system, for the purpose of subpart I of this part only, means a water system that serves greater than 10,000 and less than or equal to 50,000 persons.	
			Method Detection Limit (MDL) means the minimum concentration of a substance that can be measured and reporting with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.	
			Monitoring period for the purposes of subpart I of this part only means the schedule during which each water system must conduct tap sampling for lead and copper analysis. A monitoring period is determined by lead and copper concentrations in tap samples and the frequency can range from every six months (i.e., semi-annual) up to once every nine years. The start of each new lead monitoring period, with the exception of semi-annual monitoring, must begin on January 1.	
Optimal Corrosion Control Treatment – *Optimal corrosion control treatment,* for the purpose of subpart I of this part only, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.	§141.2			
			Pitcher filter means the filtration insert for water pitchers that removes lead in drinking water, and that is certified to remove lead in accordance with applicable standards established by the American National Standards Institute.	
			Potholing means the practice of digging a test hole to expose a potential lead service line.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
			Practical quantitation Limit (PQL) means the minimum concentration of an analyte (substance) that can be measured with a high degree of confidence that the analyte is present at or above that concentration.	
			Pre-stagnation flushing is the running of taps to flush water from plumbing prior to the minimum 6-hour stagnation period required for lead and copper tap sampling.	
			Sampling period for the purpose of subpart I of this part only means the time period, within a tap sampling monitoring period, during which the water system is required to collect samples for lead and copper analysis. The annual sampling period must be between the months of June and September, unless a different sampling period is approved in writing to be more appropriate by the primacy agency	
			School for the purpose of subpart I of this part only means any public, private, charter or other location that provides student learning for elementary or secondary students.	
Service Line Sample – *Service line sample* means a one-liter sample of water collected in accordance with §141.86(b)(3), that has been standing for at least 6 hours in a service line.	§141.2			
Single Family Structure – *Single family structure,* for the purpose of subpart I of this part only, means a building constructed as a single-family residence that is currently used as either a residence or a place of business.	§141.2			
Small Water System – *Small water system,* for the purpose of subpart I of this part only, means a water system that serves 3,300 persons or fewer.	§141.2		Small water system, for the purpose of subpart I of this part only, means a water system that serves 10,000 persons or fewer.	
			Tap sampling protocol means the instructions given to residents or those sampling on behalf of the water system to conduct tap sampling for lead and copper. Tap sampling protocols may not include any instructions or recommendations for pre-stagnation flushing or removal or cleaning of faucet aerators prior to sample collection.	
			Tap sampling protocol means the instructions given to residents or those sampling on behalf of the water system to conduct tap sampling for lead and copper. Tap sampling protocols may not include any instructions or recommendations for pre-stagnation flushing or removal or cleaning of faucet aerators prior to sample collection.	
			Wide-mouth bottles for the purpose of subpart I of this part only means bottles configured with a mouth that is at least 55 mm wide, required to be used for lead and copper tap sampling collection to optimize capturing accurate lead measurements.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Subpart D – Reporting and Recordkeeping				
§141.31 Reporting Requirements				
(d) The public water system, within 10 days of completing the public notification requirements under subpart Q of this part for the initial public notice and any repeat notices, must submit to the primacy agency a certification that it has fully complied with the public notification regulations. The public water system must include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media.	§141.31(d)		(d) (1)The public water system, within 10 days of completing the public notification requirements under subpart Q of this part for the initial public notice and any repeat notices, must submit to the primacy agency a certification that it has fully complied with the public notification regulations. For Tier 2 and 3 notices, the public water system must include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media. (2) For Tier 1 notices public water systems must provide a copy of any Tier 1 notice to the Administrator and the head of the Primacy Agency as soon as practicable, but not later than 24 hours after the public water system learns of the violation or exceedance.	
Subpart E – Special Regulations, Including Monitoring Regulations and Prohibition on Lead Use				
§141.42 Special monitoring for corrosivity characteristics				
Requires community water systems to identify if any of the following are present in the distribution system: • Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing; • Copper from piping and alloys, service lines, and home plumbing; • Galvanized piping, service lines, and home plumbing, • Ferrous piping materials such as cast iron and steel; or • Asbestos cement pipe. *States may require identification of additional materials that have the potential to release pollutants into the drinking water.	§141.42(d)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
§141.43 Prohibition on use of lead pipes solder and flux.				
~~Prohibition of use after June 19, 1986~~ ~~State Enforcement – States shall enforce effective June 19, 1988~~ ~~Lead Free:~~ • ~~Solder = <0.2% lead~~ • ~~Pipes/Fittings = <8.0% lead~~ ***Stricken provisions are no longer consistent with SDWA. ‘‘Reduction of Lead in Drinking Water Act’’ IN GENERAL.—Section 1417 of the Safe Drinking Water Act (42 U.S.C. 300g–6) is amended- ‘‘(1) IN GENERAL.—For the purposes of this section, the term ‘lead free’ means— ‘‘(A) not containing more than 0.2 percent lead when used with respect to solder and flux; and ‘‘(B) not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures. ‘‘(2) CALCULATION.—The weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture shall be calculated by using the following formula: For each wetted component, the percentage of lead in the component shall be multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component. The weighted percentage of lead of each wetted component shall be added together, and the sum of these weighted percentages shall constitute the weighted average lead content of the product. The lead content of the material used to produce wetted components shall be used to determine compliance with paragraph (1)(B). For lead content of materials that are provided as a range, the maximum content of the range shall be used.’’.	~~§141.43(a), (b), & (d)~~ Section 1417 of the Safe Drinking Water Act			The CFR citation is outdated by the Reduction of Lead in Drinking Water Act which revised the Safe Drinking Water Act. (PUBLIC LAW 111–380—JAN. 4, 2011) CFR does not appear to have been updated accordingly.
Subpart F—Maximum Contaminant Level Goals and Maximum Residual Disinfectant Level Goals				
§141.51 Maximum contaminant level goals for inorganic contaminants.				
Copper = 1.3 mg/L Lead = zero	§141.51(b)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Subpart I – Control of Lead and Copper				
§141.80 General requirements.				
(a) *Applicability and effective dates.* (1) The requirements of this subpart I constitute the national primary drinking water regulations for lead and copper. Unless otherwise indicated, each of the provisions of this subpart applies to community water systems and non-transient, non-community water systems (hereinafter referred to as "water systems" or "systems"). (2) [Reserved]	§141.80(a)	§141.80(a)(1) &(2)	(a) Applicability, effective date, and compliance deadlines. The requirements of this subpart constitute the National Primary Drinking Water Regulations for lead and copper. (1) The provisions of this subpart apply to community water systems and non-transient, noncommunity water systems (hereinafter referred to as "water systems" or "systems") as defined at 40 CFR 141.2. (2) The requirements of this subpart are effective as of [DATE 60 DAYS AFTER DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].	
		§141.80(a)(3)	(3) Community water systems and non-transient, non-community water systems must comply with the requirements of this subpart no later than [DATE THREE YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], except where otherwise specified at §§ 141.81, 141.84, 141.85, 141.86, and 141.90, or where an exemption in accordance with 40 CFR 142 at subpart C or F has been established by the Administrator.	
		§141.80(a)(4)(i)	(4) (i) Between [insert 60 days after publication of final rule in the Federal Register] and [insert 3 years after publication of the final rule in the Federal Register], community water systems and non-transient, non-community water systems must comply with 40 CFR 141.80 through 141.90 as promulgated in 56 FR 26548, June 7, 1991; 57 FR 28788, June 29, 1992; 59 FR 33862, June 30, 1994; 65 FR 2004, January 12, 2000; 72 FR 57814, October 10, 2007.	
		§141.80(a)(4)(ii)	(ii) If an exemption from Subpart I has been issued in accordance with 40 CFR 142 subpart C or F, then the water systems must comply with 40 CFR 141.80 through 141.90 as promulgated in 56 FR 26548, June 7, 1991; 57 FR 28788, June 29, 1992; 59 FR 33862, June 30, 1994; 65 FR 2004, January 12, 2000; 72 FR 57814, October 10, 2007 until the expiration of that exemption.	
Scope - These regulations establish a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples collected at consumers' taps.	§141.80(b)		Scope. These regulations establish a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line inventory, lead service line replacement, public notice, monitoring for lead in schools and child care facilities, and public education. Several of these requirements are prompted by the lead and copper action levels or the lead trigger level, specified in paragraph (c) of this section, as measured in samples collected at consumers' taps. All community water systems are subject to sampling for lead in schools and child care facilities and public education requirements regardless of the results of the compliance tap sampling.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(c) *Lead and copper action levels.* (1) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with §141.86 is greater than 0.015 mg/L (*i.e.*, if the "90th percentile" lead level is greater than 0.015 mg/L). (2) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with §141.86 is greater than 1.3 mg/L (*i.e.*, if the "90th percentile" copper level is greater than 1.3 mg/L). (3) The 90th percentile lead and copper levels shall be computed as follows: (i) The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken. (ii) The number of samples taken during the monitoring period shall be multiplied by 0.9. (iii) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(3)(ii) is the 90th percentile contaminant level. (iv) For water systems serving fewer than 100 people that collect 5 samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations. (v) For a public water system that has been allowed by the State to collect fewer than five samples in accordance with §141.86(c), the sample result with the highest concentration is considered the 90th percentile value.	§141.80(c)	§141.80 (c)(1)-(4)(i)	c) Lead trigger level, lead action level, and copper action level. Trigger levels and action levels must be determined based on tap water samples collected in accordance with the monitoring requirements of § 141.86 and tested using the analytical methods specified in § 141.89. The trigger level and action levels described in this paragraph are applicable to all sections of subpart I. Trigger level and action levels for lead and copper are as follows: (1) The lead trigger level is exceeded if the 90th percentile concentration of lead as specified in (c)(4) of this section is greater than 0.010 mg/L. (2) The lead action level is exceeded if the 90th percentile concentration of lead as specified in (c)(4) of this section is greater than 0.015 mg/L. (3) The copper action level is exceeded if the 90th percentile concentration of copper as specified in (c)(4) of this section is greater than 1.3 mg/L. (4) For purposes of this subpart, the 90th percentile concentration shall be computed as follows: (i) For systems that do not have lead service line sites and only have sites identified as Tier 3 or 4 under § 141.86(a). (A) The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken. (B) The number of samples taken during the monitoring period shall be multiplied by 0.9. (C) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(4)(i)(B) of this section is the 90th percentile concentration. (D) For water systems serving fewer than 100 people that collect 5 samples per monitoring period, the 90th percentile concentration is the average of the highest and second highest concentration. (E) For a public water system that has been allowed by the State to collect fewer than five samples in accordance with § 141.86(c), the sample result with the highest concentration is considered the 90th percentile value.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.80 (c)(4)(ii)	(ii) For public water systems with lead service lines with sites identified as Tier 1 or 2 under § 141.86(a) with enough Tier 1 or 2 sites to meet the minimum number of sites listed in § 141.86(c): (A) The results of all lead or copper samples taken at Tier 1 or Tier 2 sites during a monitoringperiod shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Sample results from Tier 3 and Tier 4 sites shall not be included in this calculation. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken. (B) The number of samples taken at Tier 1 or Tier 2 sites during the monitoring period shall be multiplied by 0.9. (C) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(4)(ii)(B) of this section is the 90th percentile concentration. (D) For water systems serving fewer than 100 people that collect 5 samples per monitoring period, the 90th percentile concentration is the average of the highest and second highest concentration. (E) For a public water system that has been allowed by the State to collect fewer than five samples in accordance with § 141.86(c), the sample result with the highest concentration is considered the 90th percentile value.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.80 (c)(4)(iii)	(iii) For systems with lead service lines with sites identified as Tier 1 or 2 under § 141.86(a) with insufficient number of Tier 1 or 2 sites to meet the minimum number of sites listed in § 141.86(c): (A) The results of all lead or copper samples taken at Tier 1 or Tier 2 sites along with the highest results from Tier 3 or Tier 4 sites sufficient to meet the minimum number of sites shall be placed in ascending order from the sample with the lowest concentration to the sample with the highestconcentration. Sample results from any remaining Tier 3 and Tier 4 sites shall not be included in this calculation. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total minimum number of sites listed in § 141.86(c). (B) The required minimum number of sites listed in § 141.86(c) shall be multiplied by 0.9. (C) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(4)(iii)(B) is the 90th percentile concentration. (D) For water systems serving fewer than 100 people that collect 5 samples per monitoring period, the 90th percentile concentration is the average of the highest and second highest concentration. (E) For a public water system that has been allowed by the State to collect fewer than five samples in accordance with § 141.86(c), the sample result with the highest concentration is considered the 90th percentile value.	
Corrosion Control Treatment Requirements - All water systems shall install and operate optimal corrosion control treatment as defined in §141.2. *** Essentially: All water systems shall be deemed optimized in accordance with §141.81(a)&(b).*** Any water system that complies with the applicable corrosion control treatment requirements specified by the State under §§141.81 and 141.82 shall be deemed in compliance with the treatment requirement contained in paragraph (d)(1) of this section.	§141.80(d)		(1) All water systems shall install and operate corrosion control treatment in accordance with §§ 141.81 and 141.82, and that meets the definition of optimal corrosion control treatment at § 141.2 of this chapter. (2) *** (3) Any small water system that complies with the applicable small system compliance flexibility requirements specified by the State under § 141.81 and § 141.93 shall be deemed in compliance with the treatment requirement in paragraph (d)(1) of this section.	
Source water treatment requirements. Any system exceeding the lead or copper action level shall implement all applicable source water treatment requirements specified by the State under §141.83.	§141.80(e)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Lead service line replacement requirements. Any system exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in §141.84.	§141.80(f)		Lead service line replacements. Lead service line replacements must be conducted as follows: (1) Any water system exceeding the lead action level specified at (c) of this section must complete mandatory lead service line replacement. Lead service line replacement must be conducted in accordance with § 141.84 and must include public education pursuant to § 141.85. (2) Any water system exceeding the lead trigger level specified at (c) of this section must complete goal-based lead service line replacement pursuant to § 141.84 and public education pursuant to § 141.85.	
Public education requirements. Pursuant to §141.85, all water systems must provide a consumer notice of lead tap water monitoring results to persons served at the sites (taps) that are tested. Any system exceeding the **lead** action level shall implement the public education requirements.	§141.80(g)		(g) *Service line inventory.* All water systems must prepare an inventory of service lines connected to its distribution system, whether or not they are owned or controlled by the water system, to identify those service lines that are made of lead or of unknown material. The inventory must be prepared in accordance with § 141.84(a).	
Monitoring and analytical requirements. All monitoring and analyses of the monitoring results under this subpart shall be completed in compliance with §§141.86, 141.87, 141.88, and 141.89.	§141.80(h)		(h) *Public education and notification requirements.* Pursuant to § 141.85(d), all water systems must provide notification of lead tap water monitoring results to persons served at the sites (taps) that are tested. In addition: (1) Any water system exceeding the lead action level specified at (c) of this section shall implement the public education requirements in accordance with § 141.85(a) and (b). (2) Any water system exceeding the lead trigger level specified at (c) of this section shall provide notification to all customers with a lead service line in accordance with § 141.85 (f). (3) Any water system exceeding the lead action level specified at (c) of this section shall notify the public in accordance with the public notification requirements in subpart Q of this part.	
Reporting requirements. Systems shall report to the State any information required by the treatment provisions of this subpart and §141.90.	§141.80(i)		(i) *Monitoring and analytical requirements.* Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under this subpart shall be completed in compliance with §§ 141.86, 141.87, 141.88, and 141.89.	
Recordkeeping requirements. Systems shall maintain records in accordance with §141.91. – 12 years	§141.80(j)		(j) *Reporting requirements.* Systems shall report to the State any information required the treatment provisions of this subpart and in § 141.90.	
Violation of national primary drinking water regulations. Failure to comply with the applicable requirements of §§141.80-141.91, including requirements established by the State pursuant to these provisions, shall constitute a violation of the national primary drinking water regulations for lead and/or copper.	§141.80(k)		*(k) Recordkeeping requirements.* Systems shall maintain records in accordance with § 141.91.	
		§141.80(l)	*(l) Testing in schools and child care facilities.* All water systems must collect samples from all schools and child care facilities within its distribution system in accordance with § 141.92.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.80(m)	(m) *Violation of national primary drinking water regulations.* Failure to comply with the applicable requirements of § § 141.80 through 141.93, including requirements established by the State pursuant to these provisions, shall constitute a violation of the national primary drinking water regulations for lead and/or copper.	
§141.81 Applicability of corrosion control treatment steps to small, medium-size and large water systems.				
A large system (serving >50,000 persons) shall complete the corrosion control treatment steps specified in paragraph (d) of this section, unless it is deemed to have optimized corrosion control under paragraph (b)(2) or (b)(3) of this section.	§141.81 (a)(1)		(1) Large water system (serving > 50,000 people). (i) Large water systems with corrosion control treatment that exceed either the lead trigger level or copper action level shall complete the corrosion control treatment steps specified in paragraph (d) of this section. (ii) Large water systems without corrosion control treatment that exceed either the lead trigger level or the copper action level shall complete the corrosion control treatment steps specified in paragraph (e) of this section. (iii) Large water systems with corrosion control treatment that do not exceed the lead trigger level and copper action level but are not deemed to have optimized corrosion control under paragraph (b)(3) of this section may be required by the State to complete the corrosion control treatment steps in paragraph (d) of this section. (iv) Large water systems without corrosion control treatment that do not exceed the lead trigger level and copper action level but are not deemed to have optimized corrosion control under paragraph (b)(3) of this section may be required by the State to complete the corrosion control treatment steps in paragraph (e) of this section.	
A small system (serving ≤3300 persons) and a medium-size system (serving >3,300 and ≤50,000 persons) shall complete the corrosion control treatment steps specified in paragraph (e) of this section, unless it is deemed to have optimized corrosion control under paragraph (b)(1), (b)(2), or (b)(3) of this section.	§141.81 (a)(2)		(2) Medium-size water systems (serving > 10,000 and ≤ 50,000 people). (i) Medium-size water systems with corrosion control treatment that exceed either the lead trigger level or copper action level shall complete the corrosion control treatment steps specified in paragraph (d) of this section. (ii) Medium-size water systems without corrosion control treatment that exceed either the lead or copper action level shall complete the corrosion control treatment steps specified in paragraph (e) of this section. (iii) Medium-size water systems without corrosion control treatment that exceed the lead trigger level shall complete the treatment recommendation steps specified in paragraph (e) of this section. The water system shall complete the remaining steps in paragraph (e) of this section if it subsequently exceeds either the lead or copper action level.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.81 (a)(3)	(3) Small water systems (serving ≤ 10,000 people). (i) Small water systems with corrosion control treatment that exceed either the lead trigger level or copper action level shall complete the corrosion control treatment steps specified in paragraph (d) of this section. (ii) Small water systems without corrosion control treatment that exceed either the lead or copper action level shall complete the corrosion control treatment steps specified in paragraph (e) of this section. (iii) Small water systems without corrosion control treatment that exceed the lead trigger level shall complete the treatment recommendation steps specified in paragraph (e) of this section. The water system shall complete the remaining steps in paragraph (e) of this section, if it subsequently exceeds either the lead or copper action level.	
A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one of the criteria specified in paragraphs (b)(1) through (b)(3) of this section. Any such system deemed to have optimized corrosion control under this paragraph, and which has treatment in place, shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the State determines appropriate to ensure optimal corrosion control treatment is maintained.	§141.81(b)		(b) *Optimized corrosion control.* A system is deemed to have optimized or re-optimized corrosion control and is not required to complete the applicable corrosion control re-optimization steps identified in this section if the system satisfies one of the criteria specified in (b)(1) through (b)(3) of this section. Any such system deemed to have optimized corrosion control under this paragraph and which has treatment in place shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the State determines to be appropriate to ensure optimal corrosion control treatment is maintained. Any small community water system or Non-transient Non-community water system selecting a small system option under paragraph (b)(4) of this section shall follow the schedule for that small system option under § 141.81(f). Any small system selecting a small system option under § 141.93 and which has treatment in place shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the State determines to be appropriate to ensure optimal corrosion control treatment is maintained.	
A small or medium-size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with §141.86.	§141.81 (b)(1)		(1) A small or medium-size water system is deemed to have optimized corrosion control if the water system does not exceed the lead trigger level and copper action level during two consecutive 6-month monitoring periods conducted in accordance with § 141.86(b) and (d)(i) or does not exceed the lead trigger level and copper action level in monitoring conducted in accordance with § 141.86(b) and (d)(ii)(C) or (D). A small or medium-size water system is deemed to have re-optimized corrosion control if the water system does not exceed the lead trigger level and copper action level during two consecutive 6-month monitoring periods conducted in accordance with § 141.86.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any water system may be deemed by the State to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the State that it has conducted activities equivalent to the corrosion control steps applicable to such system under this section. Water systems deemed to have optimized corrosion control under this paragraph shall operate in compliance with the State-designated optimal water quality control parameters in accordance with §141.82(g) and continue to conduct lead and copper tap and water quality parameter sampling in accordance with §141.86(d)(3) and §141.87(d), respectively. A system shall provide the State with the following information in order to support a determination under this paragraph: (i) The results of all test samples collected for each of the water quality parameters in §141.82(c)(3). (ii) A report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in §141.82(c)(1), the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment; (iii) A report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumers' taps; and (iv) The results of tap water samples collected in accordance with §141.86 at least once every six months for one year after corrosion control has been installed.	§141.81 (b)(2)		(2) Small or medium-size systems that exceed the lead trigger level but do not exceed the lead and copper action levels during two consecutive 6-month monitoring periods conducted in accordance with § 141.86(b) and (d)(i) or small or medium-size systems that exceed the lead trigger level but do not exceed the lead and copper action levels in monitoring conducted in accordance with § 141.86(d)(1)(ii)(B). A small or medium-size water system is deemed to have re-optimized corrosion control if the water system does not exceed the lead trigger level and copper action level during two consecutive 6-month monitoring periods conducted in accordance with § 141.86. (i) Water systems without corrosion control treatment must complete the treatment recommendation step to be deemed optimized under this section. (ii) Water systems with corrosion control treatment are deemed optimized or re-optimized if the system meets the requirements of this section and the State has not required the system to meet optimal water quality parameters and monitor under § 141.87(d).	
Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with §141.86 and source water monitoring conducted in accordance with §141.88 that demonstrates for two consecutive 6-month monitoring periods that the difference between the 90th percentile tap water lead level computed under §141.80(c)(3), and the highest source water lead concentration is less than the Practical Quantitation Level for lead specified in §141.89(a)(1)(ii).	§141.81 (b)(3)		(3) Any water system is deemed to have optimized or re-optimized corrosion control if it submits results of tap water monitoring in accordance with § 141.86 demonstrating that the 90th percentile tap water lead level is less than or equal to the practical quantitation level of 0.005 mg/L for two consecutive 6-month monitoring periods.	
Those systems whose highest source water lead level is below the Method Detection Limit may also be deemed to have optimized corrosion control under this paragraph if the 90th percentile tap water lead level is less than or equal to the Practical Quantitation Level for lead for two consecutive 6-month monitoring periods.	§141.81 (b)(3)(i)		(i) RESERVED.	
Any water system deemed to have optimized corrosion control in accordance with this paragraph shall continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in §141.86(c) and collecting the samples at times and locations specified in §141.86(d)(4)(iv).	§141.81 (b)(3)(ii)		(ii) Any water system deemed to have optimized or re-optimized corrosion control in accordance with this paragraph shall continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in § 141.86(c) and collecting samples at times and locations specified in § 141.86(d)(4)(iv).	
Any water system deemed to have optimized corrosion control pursuant to this paragraph shall notify the State in writing pursuant to §141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in that section. *The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. *The State may require any such system to conduct additional monitoring or to take other action the State deems appropriate to ensure that such systems maintain minimal levels of corrosion in the distribution system.	§141.81 (b)(3)(iii)		(iii) Any water system deemed to have optimized or re-optimized corrosion control pursuant to this paragraph shall notify the State in writing pursuant to § 141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in § 141.90. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The State may require any such water system to conduct additional monitoring or to take other action the State deems appropriate to ensure that such water system maintains minimal levels of corrosion in the distribution system.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(iv) As of July 12, 2001, a system is not deemed to have optimized corrosion control under this paragraph, and shall implement corrosion control treatment pursuant to paragraph (b)(3)(v) of this section unless it meets the copper action level.	§141.81 (b)(3)(iv)		(iv) A water system is not deemed to have optimized or re-optimized corrosion control under this paragraph and shall implement corrosion control treatment pursuant to (b)(3)(v) of this section unless it meets the copper action level.	
Any system triggered into corrosion control because it is no longer deemed to have optimized corrosion control under this paragraph shall implement corrosion control treatment in accordance with the deadlines in "Treatment steps and deadlines for small and medium systems." Any such large system shall adhere to the schedule specified in that paragraph for medium-size systems, with the time periods for completing each step being triggered by the date the system is no longer deemed to have optimized corrosion control under this paragraph.	§141.81 (b)(3)(v)		(v) Any water system triggered into corrosion control because it is no longer deemed to have optimized or re-optimized corrosion control under this paragraph shall implement corrosion control treatment in accordance with the deadlines in paragraph (d) or (e) of this section. The time period for completing each step shall be triggered by the date the sampling was conducted showing that the water system no longer meets the requirements to be deemed to have optimized or re-optimized corrosion control under this paragraph.	
		§141.81 (b)(4)	(4) Any small system selecting a small system compliance option shall monitor and follow the small system option steps described in § 141.93.	
Any small or medium-size water system that is required to complete the corrosion control steps due to its exceedance of the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two consecutive monitoring periods conducted pursuant to §141.86 and submits the results to the State. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the State, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The requirement for any small- or medium-size system to implement corrosion control treatment steps in accordance with "Treatment steps and deadlines for small and medium systems" of this section (including systems deemed to have optimized corrosion control under paragraph (b)(1) of this section) is triggered whenever any small- or medium-size system exceeds the lead or copper action level. *The State may require a system to repeat treatment steps previously completed by the system where the State determines that this is necessary to implement properly the treatment requirements of this section. The State shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small- or medium-size system to implement corrosion control treatment steps in accordance with paragraph (e) of this section (including systems deemed to have optimized corrosion control under paragraph (b)(1) of this section) is triggered whenever any small- or medium-size system exceeds the lead or copper action level.	§141.81(c)	§141.81(c)(1)	(c) *Corrosion control steps completion for small and medium-size water systems without corrosion control treatment.* (1) Any small or medium-size water system that is required to complete the corrosion control steps in paragraph (e) of this section due to its exceedance of the lead or copper action level may cease completing the treatment steps after paragraph (e), Step 2 of this section, when the water system meets both action levels during each to two consecutive 6-month monitoring periods conducted pursuant to § 141.86 and submits the results to the State. Any such system required to conduct a corrosion control treatment study under paragraph (e), Step 3 of this section, shall complete the study and paragraph (e), Step 4 of this section, unless the water system meets both action levels during each of two consecutive six-month monitoring periods prior to the start of the study. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the water system (or the State) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety, and complete all the steps through installation of optimal corrosioncontrol treatment (paragraph (e), Step 5 of this section). The State may require a water system to repeat treatment steps previously completed by the water system when the State determines that this is necessary to implement the treatment requirements of this section. The State shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium-size water system to implement corrosion control treatment steps in accordance with paragraph (e) of this section (including water systems deemed to have optimized corrosion control under paragraph (b)(1) of this section) is triggered whenever any small or medium-size water system exceeds the lead or copper action level.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.81(c)(2)	(2) Any small or medium-size water system that is required to complete the corrosion control steps in paragraph (e) of this section due to its exceedance of the lead trigger level may cease completing the treatment steps after paragraph (e), Step 2 of this section. Any such system required to conduct a corrosion control treatment study under paragraph (e), Step 3 of this section, shall complete the study and paragraph (e), Step 4 of this section. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the water system (or the State) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety and complete all the steps through installation of optimal corrosion control treatment paragraph (e), (Step 5) of this section. The State may require a water system to repeat treatment steps previously completed by the water system when the State determines that this is necessary to implement the treatment requirements of this section. The State shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium-size water system to implement corrosion control treatment steps in accordance with paragraph (e) of this section (including water systems deemed to have optimized corrosion control under paragraph (b)(2)(i) of this section) is triggered whenever any small or medium-size water system exceeds the lead trigger level or copper action level.	
Treatment steps and deadlines for large systems. ****There is a possibility that we may exclude this.****	§141.81(d)		(d) *Treatment steps and deadlines for water systems re-optimizing corrosion control treatment.* Except as provided in paragraph (b) of this section, water systems with corrosion control treatment shall complete the following corrosion control treatment steps (described in the referenced portions of §§ 141.82, 141.86 and 141.87) by the indicated time periods.	
		§141.81(d)(1)	(1) *Step 1*. The water system shall complete the initial tap sampling (§ 141.86(d)(1) and § 141.87(b)) until the water system either exceeds the lead trigger level or copper action level or becomes eligible for reduced monitoring under § 141.86(d)(4)(ii)(A). A water system exceeding the lead trigger level or copper action level shall recommend optimal corrosion control treatment (§ 141.82(a)(5) or (6) or (7)) within six months after the end of the monitoring period during which it exceeds either the lead trigger level or copper action level.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.81(d)(2)	(2) *Step 2*. (i) Large water systems that exceed the lead trigger level or copper action level shall conduct the corrosion control studies for re-optimization under paragraph (d), Step 3 of this section. (ii) Within 12 months after the end of the monitoring period during which a small or medium-size water system with corrosion control treatment exceeds the lead trigger level or copper action level, the State may require the water system to perform corrosion control studies for re-optimization (§ 141.81(d)(2) or (3)). If the State does not require the system to perform such studies, the State shall specify re-optimized corrosion control treatment (§ 141.82(d)(3) or (4)) within the following timeframes: (A) For medium-size water systems, within 12 months after the end of the monitoring period during which such water system exceeds the lead trigger level or copper action level. (B) For small water systems, within 18 months after the end of the monitoring period during which such water system exceeds the lead trigger level or copper action level.	
		§141.81(d)(3)	(3) *Step 3*. (i) Large water systems that exceed the lead trigger level or copper action level shall complete the corrosion control treatment studies for re-optimization within 18 months. (ii) If the State requires a water system to perform corrosion control studies under paragraph (d), Step 2 of this section, the water system shall complete the studies (§ 141.82(c)(1)) within 18 months after the State requires that such studies be conducted.	
		§141.81(d)(4)	(4) *Step 4*. (i) The State shall designate re-optimized corrosion control treatment (§ 141.82(d)(3)) within six months after completion of paragraph (d)(3)(i), Step 3 of this section. (ii) If the water system has performed corrosion control studies under paragraph (d), Step 2 of this section, the State shall designate re-optimized corrosion control treatment (§ 141.82(d)(3) or (4) within six months after completion of paragraph (d), Step 3(ii) of this section.	
		§141.81(d)(5)	(5) *Step 5*. (i) Large water systems shall complete modifications to corrosion control treatment to have re-optimized corrosion control treatment installed within 12 months after completion of paragraph (d), Step 4(i) of this section. (ii) Small or medium-size water systems that exceed the lead trigger level or copper action level shall install re-optimized corrosion control treatment (§ 141.82(e)(3) or (4)) within 12 months after completion of paragraph (d), Step 4(ii) of this section.	
		§141.81(d)(6)	(6*) Step 6*. Water systems shall complete follow-up sampling (§ 141.86(d)(2) and § 141.87(c)) within 12 months after completion of paragraph (d), Step 5(i) or (ii) of this section.	
		§141.81(d)(7)	(7) *Step 7*. The State shall review the water system's installation of treatment and designate optimal water quality control parameters (§ 141.82(f)(1)) within six months of completion of paragraph (d)(6), Step 6of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.81(d)(8)	(8*) Step 8*. The water system shall operate in compliance with the State-designated optimal water quality control parameters (§ 141.82(g)(1)) and continue to conduct tap sampling (§ 141.86(d)(3) and water quality parameter monitoring under § 141.87(d)).	
		§141.81(e)	(e) *Treatment steps and deadlines for small and medium-size systems without corrosion control treatment*. Except as provided in paragraph (b) of this section, small and medium-size water systems without corrosion control treatment shall complete the following corrosion control treatment steps (described in the referenced portions of §§ 141.82, 141.86 and 141.87) by the indicated time periods.	
Treatment Steps and deadlines for small and medium-size systems. *Step 1:* The system shall conduct initial tap sampling (lead and copper and WQP) until the system either exceeds the lead or copper action level or Definitions eligible for reduced lead and copper tap monitoring. A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment within six months after the end of the monitoring period during which it exceeds one of the action levels.	§141.81(e)	§141.81(e)(1)	(1) *Step 1*. The water system shall complete the initial tap sampling (§ 141.86(d)(1) and § 141.87(b)) until the water system either exceeds the lead trigger level or copper action level or becomes eligible for reduced monitoring under § 141.86(d)(4)(i)(A) or (B). A water system exceeding the lead trigger level or copper action level shall recommend optimal corrosion control treatment (§ 141.82(a)(1) or (2) or (3) or (4)) within six months after the end of the monitoring period during which it exceeds either the lead trigger level or copper action level.	
Step 2: Within 12 months after the end of the monitoring period during which a system exceeds the lead or copper action level, the State may require the system to perform corrosion control studies. If the State does not require the system to perform such studies, the State shall specify optimal corrosion control treatment within the following timeframes: (i) For medium-size systems, within 18 months after the end of the monitoring period during which such system exceeds the lead or copper action level. (ii) For small systems, within 24 months after the end of the monitoring period during which such system exceeds the lead or copper action level	§141.81(e)	§141.81(e)(2)	(2) *Step 2*. Within 12 months after the end of the monitoring period during which a water system exceeds the lead trigger level or copper action level, the State may require the water system to perform corrosion control studies (§ 141.82(b)(1)); the State shall notify the system in writing of this requirement. If the State does not require the system to perform such studies, the State shall specify optimal corrosion control treatment (§ 141.82(d)(1) or (2)) within the following timeframes: (i) For medium-size water systems, within 18 months after the end of the monitoring period during which such water system exceeds the lead trigger level or copper action level. (ii) For small water systems, within 24 months after the end of the monitoring period during which such water system exceeds the lead trigger level or copper action level.	
Step 3: If the State requires a system to perform corrosion control studies under step 2, the system shall complete the studies within 18 months after the State requires that such studies be conducted.	§141.81(e)	§141.81(e)(3)	(3) *Step 3*. If the State requires a water system to perform corrosion control studies under paragraph (e), Step 2 of this section, the water system shall complete the studies (§ 141.82(c)(1)) within 18 months after the State notifies the system in writing that such studies must be conducted.	
Step 4: If the system has performed corrosion control studies under step 2, the State shall designate optimal corrosion control treatment within 6 months after completion of step 3.	§141.81(e)	§141.81(e)(4)	(4) *Step 4*. If the water system has performed corrosion control studies under paragraph (e), Step 2 of this section, the State shall designate optimal corrosion control treatment (§ 141.82(d)(1) or (2)) within six months after completion of paragraph (e), Step 3 of this section.	
Step 5: The system shall install optimal corrosion control treatment within 24 months after the State designates such treatment.	§141.81(e)	§141.81(e)(5)	(5) *Step 5*. Any water system that exceeds the lead or copper action level after the State designates optimal corrosion control treatment under paragraph (e), Step 4 of this section shall install optimal corrosion control treatment (§ 141.82(e)(1) or (2)) within 24 months.	
Step 6: The system shall complete follow-up sampling (§141.86(d)(2) and §141.87(c)) within 36 months after the State designates optimal corrosion control treatment.	§141.81(e)	§141.81(e)(6)	(6*) Step 6*. The system shall complete follow-up sampling (§ 141.86(d)(2)(i) and § 141.87(c) within 12 months after completion of paragraph (e), Step 5 of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Step 7: The State shall review the system's installation of treatment and designate optimal water quality control parameters within 6 months after completion of step 6.	§141.81(e)	§141.81(e)(7)	(7) *Step 7*. The State shall review the water system's installation of treatment and designate optimal water quality control parameters (§ 141.82(f)(1)) within six months of completion of paragraph (e), Step 6 of this section.	
Step 8: The system shall operate in compliance with the State-designated optimal water quality control parameters and continue to conduct tap sampling (§141.86(d)(3) and §141.87(d)).	§141.81(e)	§141.81(e)(8)	(8*) Step 8*. The water system shall operate in compliance with the State-designated optimal water quality control parameters (§ 141.82(g)(1)) and continue to conduct tap sampling (§ 141.86(d)(3) and water quality parameter monitoring under § 141.87(d)).	
		§141.81(f)	(f) *Treatment steps and deadlines for small community water systems and Non-transient Non-community water systems using small system compliance flexibility options under § 141.93.* Small water systems selecting the corrosion control small system compliance flexibility option shall complete the following steps by the indicated time periods.	
		§141.81(f)(1)	(1) *Step 1*. The water system shall complete the initial tap sampling (§ 141.86(d)(1) and § 141.87(b)) until the water system either exceeds the lead trigger level or copper action level or becomes eligible for reduced monitoring under § 141.86(d)(4)(i)(A) or (B). A water system exceeding the lead trigger level or copper action level shall recommend a small system compliance flexibility option (§ 141.93(a) or (b)) within six months after the end of the monitoring period during which it exceeds either the lead trigger level or copper action level.	
		§141.81(f)(2)	(2) *Step 2*. The State shall approve in writing the recommended small system treatment option or designate another small system treatment option or require the water system to optimize or re-optimize corrosion control treatment within six months of completion of paragraph (f), Step 1 of this section. Water systems required by the State to optimize or re-optimize corrosion control treatment shall follow the schedules in paragraphs (d) or (e) of this section.	
		§141.81 (f)(3)(i)	(3) *Step 3*. (i) Small water systems using the lead service line replacement compliance flexibility option under § 141.93. (A) Small water systems shall begin the lead service line replacement program and must begin to replace lead service line lines at a rate approved by the State within one year after State approval under paragraph (f), Step 2 of this section. (B) Small water systems shall continue to replace lead service lines at a rate approved by the State and shall complete replacement of all lead service lines no later than 15 years after commencement of the program.	
		§141.81 (f)(3)(ii)	(ii) Small water systems using the point-of-use (POU) device compliance flexibility option under § 141.93. (A) Small water systems shall install POU devices at the locations listed in § 141.93 on a schedule not to exceed one year after State approval under paragraph (f), Step 2 of this section, or a shorter schedule if specified by the State. (B) Small water systems shall operate and maintain the POU devices until the water system receives State approval to select one of the other small system compliance flexibility options under § 141.93.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.81 (f)(3)(iii)	(iii) Non-transient, non-community water systems using the replacement of lead-bearing materials option under § 141.93(d)(4). (A) Non-transient, non-community water systems with lead service lines shall replace the lead service line within one year after State approval under Step 2 and shall complete the replacement of other lead-bearing materials on a schedule not to exceed one year after State approval under paragraph (f), Step 2 of this section, or a shorter schedule if specified by the State. (B) Non-transient, non-community water systems without lead service lines shall complete the replacement of lead-bearing material within one year after State approval under paragraph (f), Step 2 of this section, or a shorter schedule if specified by the State.	
§141.82 Description of corrosion control treatment requirements.				
System recommendation regarding corrosion control treatment. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section which the system believes constitutes optimal corrosion control for that system. The State may require the system to conduct additional water quality parameter monitoring in accordance with §141.87(b) to assist the State in reviewing the system's recommendation.	§141.82(a)	§141.82(a)(1)	a) *System recommendation regarding corrosion control treatment*. (1) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, large systems without corrosion control treatment that exceed the lead trigger level or medium-size water systems without corrosion control treatment that exceed either the lead or copper action level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section as the optimal corrosion control treatment for that system. The State may require the system to conduct additional water quality parameter monitoring in accordance with **§** 141.87(b) to assist the State in reviewing the system's recommendation. Large systems must complete the study in paragraph (c)(1) of this section.	
		§141.82(a)(2)	(2) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, small water systems without corrosion control treatment that exceed the lead or copper action level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section as the optimal corrosion control treatment for that system or one of the small system options listed in paragraph § 141.93. The State may require the system to conduct additional water quality parameter monitoring in accordance with § 141.87(b) to assist the State in reviewing the system's recommendation.	
		§141.82(a)(3)	(3) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, any medium-size water systems without corrosion control treatment exceeding the lead trigger level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section as the optimal corrosion control treatment for that system. This corrosion control treatment shall be installed if the lead or copper action level is subsequently exceeded. The State may require the system to conduct additional water quality parameter monitoring in accordance with § 141.87(b) to assist the State in reviewing the system's recommendation.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(a)(4)	(4) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, any small water system without corrosion control treatment exceeding the lead trigger level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section as the optimal corrosion control treatment for that system or shall recommend State approval to elect one of the small system compliance options listed in paragraph § 141.93. This corrosion control treatment or small system option shall be implemented if the lead or copper action level is subsequently exceeded. The State may require the system to conduct additional water quality parameter monitoring in accordance with § 141.87(b) to assist the State in reviewing the system's recommendation.	
		§141.82(a)(5)	(5) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, any large or medium system with corrosion control treatment that exceeds the lead trigger level shall conduct a re-optimization evaluation of the existing corrosion control treatment and make a recommendation to the State for modification (if any) of the designation of optimal corrosion control treatment. This re-optimization evaluation shall include an evaluation of other corrosion control treatments listed in paragraph (c)(2) of this section to determine the optimal corrosion control treatment. The State may require the system to conduct additional water quality parameter monitoring in accordance with § 141.87(b) to assist the State in reviewing the system's recommendation for a designation of optimal corrosion control treatment. Large systems must complete the study in paragraph (c)(2) of this section.	
		§141.82(a)(6)	(6) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, any small system with corrosion control treatment exceeding an action level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(2) of this section as the optimal corrosion control for that system or State approval of one of the small system options listed in paragraph § 141.93. The State may require the system to conduct additional water quality parameter monitoring in accordance with § 141.87(b) to assist the State in reviewing the system's recommendation.	
		§141.82(a)(7)	(7) Based upon the results of lead and copper tap sampling and water quality parameter monitoring, any small system with corrosion control treatment exceeding the lead trigger level shall recommend designation of one or more of the corrosion control treatments listed in paragraph (c)(2) of this section as the optimal corrosion control treatment for that system or State approval of one of the small system options listed in paragraph § 141.93. This corrosion control treatment or small system option shall be implemented if the lead or copper action level is subsequently exceeded. The State may require the system to conduct additional water quality parameter monitoring in accordance with **§** 141.87(b) to assist the State in reviewing the system's recommendation.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
State decision to require studies of corrosion control treatment (applicable to small and medium-size systems). The State may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under paragraph (c) of this section to identify optimal corrosion control treatment for the system.	§141.82(b)	§141.82(b)(1)	(b) *State decision to require studies to identify initial optimal corrosion control treatment (applicable to small and medium-size systems) and re-optimized corrosion control treatment.* (1) The State may require any small or medium-size system without corrosion control that exceeds either the lead or copper action level to perform corrosion control treatment studies under paragraph (c)(1) of this section to identify *optimal corrosion control treatment* for the system.	
		§141.82(b)(2)	(2) The State may require any small or medium-size system without corrosion control that exceeds the lead trigger level to perform corrosion control treatment studies under paragraph (c)(1) of this section to *identify optimal corrosion control treatment* for the system. This corrosion control treatment shall be installed if the lead or copper action level is subsequently exceeded.	
		§141.82(b)(3)	(3) The State may require any small or medium-size water systems with corrosion control treatment exceeding either the lead trigger level or copper action level to perform corrosion control treatment studies under paragraph (c)(3) of this section to identify re-optimized optimal corrosion control treatment for the system (i.e. optimal corrosion control treatment after a re-optimization evaluation).	
Performance of corrosion control studies. Six (6) steps.	§141.82(c)			
(1) Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system: (i) Alkalinity and pH adjustment; (ii) Calcium hardness adjustment; and (iii) The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.	§141.82 (c)(1)	§141.82 (c)(1)(i)	(1) Water systems without corrosion control that are conducting corrosion control studies shall complete the following: (i) Any water system without corrosion control treatment shall evaluate the effectiveness of each of the following treatments, and if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for the system: (A) Alkalinity and pH adjustment; (B) The addition of an orthophosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples; (C) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 1 mg/L orthophosphate residual concentration in all tap test samples, and; (D) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 3 mg/L orthophosphate residual concentration in all tap test samples.	
		§141.82 (c)(1)(ii)	(ii) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry, and distribution system configurations. Metal coupon tests can be used as a screen to reduce the number of options that are evaluated using pipe rig/loops to the current conditions and two options.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82 (c)(1)(iii)	(iii) The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments previously listed in this section: (A) Lead; (B) Copper; (C) pH; (D) Alkalinity; (E) Orthophosphate (when an orthophosphate-based inhibitor is used), and; (F) Silicate (when a silicate-based inhibitor is used).	
		§141.82 (c)(1)(iv)	(iv) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with one of the following: (A) Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section. (B) Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section unless the treatment was found to be ineffective in a previous pipe loop/rig study.	
		§141.82 (c)(1)(v)	(v) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the effects identified in this section.	
		§141.82 (c)(1)(vi)	(vi) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the State in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraphs (c)(2)(i) through (v) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(2) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.	§141.82 (c)(2)	§141.82 (c)(2)(i)	(2) Systems with a pH and alkalinity corrosion control treatment process conducting re-optimization corrosion control studies shall complete the following: (i) Any system with a pH and alkalinity corrosion control treatment process shall evaluate the effectiveness of each of the following treatments, and if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for the system: (A) Additional alkalinity and/or pH adjustment; (B) The addition of an orthophosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples; (C) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 1 mg/L orthophosphate residual concentration in all tap test samples, and; (D) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 3 mg/L orthophosphate residual concentration in all tap test samples.	
		§141.82 (c)(2)(ii)	(ii) The system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry, and distribution system configurations. Coupon tests can be used as a screen to reduce the number of options that are evaluated using pipe rig/loops to the current conditions and two options.	
		§141.82 (c)(2)(iii)	(iii) The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments listed above: (A) Lead; (B) Copper; (C) pH; (D) Alkalinity; (E) Orthophosphate (when an orthophosphate-based inhibitor is used), and; (F) Silicate (when a silicate-based inhibitor is used).	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82 (c)(2)(iv)	(iv) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with one of the following: (A) Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section. (B) Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section unless the treatment was found to be ineffective in a previous pipe loop/rig study.	
		§141.82 (c)(2)(v)	(v) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the effects identified in this section.	
		§141.82 (c)(2)(vi)	(vi) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the State in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraph (c)(1)(i) through (v) of this section.	
(3) The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments listed above: (i) Lead; (ii) Copper; (iii) pH; (iv) Alkalinity; (v) Calcium; (vi) Conductivity; (vii) Orthophosphate (when an inhibitor containing a phosphate compound is used); (viii) Silicate (when an inhibitor containing a silicate compound is used); (ix) Water temperature.	§141.82 (c)(3)	§141.82 (c)(3)(i)	(3) Systems with an inhibitor corrosion control treatment process conducting re-optimization corrosion control studies shall complete the following: (i) Any system with an inhibitor corrosion control treatment process shall evaluate the effectiveness of each of the following treatments, and if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for the system: (A) Alkalinity and/or pH adjustment; (B) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 1 mg/L orthophosphate residual concentration in all tap test samples unless the current inhibitor process already meets this residual, and; (C) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain a 3 mg/L orthophosphate residual concentration in all tap test samples unless the current inhibitor process already meets this residual.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82 (c)(3)(ii)	(ii) The system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry, and distribution system configurations. Coupon tests can be used as a screen to reduce the number of options that are evaluated using pipe rig/loops to the current conditions and two options.	
		§141.82 (c)(3)(iii)	(iii) The water system shall measure the following water quality parameters in any tests conducted under this paragraph before and after evaluating the corrosion control treatments listed above: (A) Lead; (B) Copper; (C) pH; (D) Alkalinity; (E) Orthophosphate (when an orthophosphate-based inhibitor is used), and; (F) Silicate (when a silicate-based inhibitor is used).	
		§141.82 (c)(3)(iv)	(iv) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with one of the following: (A) Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section. (B) Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the constraints identified in this section unless the treatment was found to be ineffective in a previous pipe loop/rig study.	
		§141.82 (c)(3)(v)	(v) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes. Systems using coupon studies to screen and/or pipe loop/rig studies to evaluate treatment options shall not exclude treatment strategies from the studies based on the effects identified in this section.	
		§141.82 (c)(3)(vi)	(vi) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the State in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraph (c)(3)(i) through (v) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(4) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following: (i) Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or (ii) Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.	§141.82 (c)(4)			
(5) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.	§141.82 (c)(5)			
(6) On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the State in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraphs (c) (1) through (5) of this section.	§141.82 (c)(6)			
State designation of optimal corrosion control treatment. (1) Based upon consideration of available information including, where applicable, studies performed under paragraph (c) of this section and a system's recommended treatment alternative, the State shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(1) of this section. When designating optimal treatment the State shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes. (2) The State shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the State requests additional information to aid its review, the water system shall provide the information.	§141.82(d)	§141.82(d)(1)	(d) *State designation of optimal corrosion control treatment and re-optimized corrosion control treatment*. (1) *Designation of Initial OCCT for medium systems.* (i) Based upon considerations of available information including, where applicable, studies conducted under paragraph (c)(1) of this section and a system's recommended corrosion control treatment option, the State shall either approve the corrosion control treatment option recommended by the medium-size water system or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(1)(i) of this section. When designating optimal corrosion control treatment, the State shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes. (ii) The State shall notify the medium-size water system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the State requests additional information to aid its review, the water system shall provide the information.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(d)(2)	(2) *Small systems.* (i) Based upon considerations of available information including, where applicable, studies conducted under paragraph (c)(1) of this section and a system's recommended treatment alternative, the State shall either approve the corrosion control treatment option recommended by the small water system or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(1)(i) of this section or a *small water system compliance flexibility* under § 141.93. When designating optimal corrosion control treatment, the State shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes. (ii) The State shall notify the small water system of its decision on either optimal corrosion control treatment or a *small water system compliance flexibility* in writing and explain the basis for this determination. If the State requests additional information to aid its review, the water system shall provide the information.	
		§141.82(d)(3)	(3) *Designation of Re-optimized OCCT for large and medium systems.* (i) Based upon considerations of available information including, where applicable, studies conducted under paragraph (c)(2) or (c)(3) of this section and a system's recommended treatment alternative, the State shall either approve the corrosion control treatment modification option recommended by the water system or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(2)(i) or (c)(3)(i) of this section. When designating re-optimized corrosion control treatment, the State shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes. (ii) The State shall notify the water system of its decision on re-optimized corrosion control treatment in writing and explain the basis for this determination. If the State requests additional information to aid its review, the water system shall provide the information.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(d)(4)	(4) *Designation of Re-optimization of OCCT or small water system compliance flexibility.* (i) Based upon considerations of available information including, where applicable, studies conducted under paragraph (c)(2) or (c)(3) of this section and a system's recommended treatment alternative, the State shall either approve the corrosion control treatment modification recommended by the small water system or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(2)(i) or (c)(3)(i) of this section or an applicable *small water system compliance flexibility* under § 141.93. When designating re-optimized corrosion control treatment, the State shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes. (ii) The State shall notify the water system of its decision on re-optimized corrosion control treatment in writing and explain the basis for this determination. If the State requests additional information to aid its review, the water system shall provide the information.	
Installation of optimal corrosion control. Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the State under paragraph (d) of this section.	§141.82(e)	§141.82(e)(1)	(e) *Installation of optimal corrosion control treatment and re-optimization of corrosion control treatment*. (1) Each medium-size water system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the State under paragraph (d)(1) of this section.	
		§141.82(e)(2)	(2) Each small water system shall properly install and operate throughout its distribution system the optimal corrosion control treatment or implement the *small water system compliance flexibility* as designated by the State under paragraph (d)(2) of this section.	
		§141.82(e)(3)	(3) Each medium-size water system shall properly modify and operate throughout its distribution system the re-optimized corrosion control treatment designated by the State under paragraph (d)(3) of this section.	
		§141.82(e)(4)	(4) Each small water system shall properly modify and operate throughout its distribution system the re-optimized corrosion control treatment or implement the *small water system compliance flexibility* designated by the State under paragraph (d)(2) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
State review of treatment and specification of optimal water quality control parameters. The State shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated by the State in paragraph (d) of this section. Upon reviewing the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the State shall designate: (1) A minimum value or a range of values for pH measured at each entry point to the distribution system; (2) A minimum pH value, measured in all tap samples. Such value shall be equal to or greater than 7.0, unless the State determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control; (3) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the State determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system; (4) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples; (5) If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples. The values for the applicable water quality control parameters listed above shall be those that the State determines to reflect optimal corrosion control treatment for the system. The State may designate values for additional water quality control parameters determined by the State to reflect optimal corrosion control for the system. The State shall notify the system in writing of these determinations and explain the basis for its decisions.	§141.82(f)	§141.82(f)(1)	(f) *State review of treatment and specification of optimal water quality control parameters for optimal corrosion control treatment and re-optimized corrosion control treatment*. (1) The State shall evaluate the results of all lead and copper tap sampling and water quality parameter sampling submitted by the water system and determine whether the water system has properly installed and operated the optimal corrosion control treatment designated by the State in paragraph (d)(1) or (d)(2) of this section, respectively. Upon reviewing the results of tap water and water quality parameter monitoring by the water system, both before and after the water system installs optimal corrosion control treatment, the State shall designate: (i) A minimum value or a range of values for pH measured at each entry point to the distribution system. (ii) A minimum pH value measured in all tap samples. Such a value shall be equal to or greater than 7.0, unless the State determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control. (iii) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for orthophosphate or silicate measured at each entry point to the distribution system. (iv) If a corrosion inhibitor is used, a minimum orthophosphate or silicate concentration measured in all tap samples that the State determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system. When orthophosphate is used, such a concentration shall be equal to or greater than 0.5 mg/L as orthophosphate, unless the State determines that meeting an orthophosphate residual of 0.5 mg/L is not technologically feasible or is not necessary for the system to optimize corrosion control. (v) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples. (vi) The values for the applicable water quality control parameters, previously listed in this section, shall be those that the State determines to reflect optimal corrosion control treatment for the water system. The State may designate values for additional water quality control parameters determined by the State to reflect optimal corrosion control for the water system. The State shall notify the system in writing of these determinations and explain the basis for its decisions.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(f)(2)	(2) The State shall evaluate the results of all lead and copper tap sampling and water quality parameter monitoring submitted by the water system and determine whether the water system has properly installed and operated the re-optimized corrosion control treatment designated by the State in paragraph (d)(3) or (d)(4) of this section, respectively. Upon reviewing the results of tap sampling and water quality parameter monitoring by the water system, both before and after the water system installs re-optimized corrosion control treatment, the State shall designate: (i) A minimum value or a range of values for pH measured at each entry point to the distribution system. (ii) A minimum pH value measured in all tap samples. Such a value shall be equal to or greater than 7.0, unless the State determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control. (iii) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for orthophosphate or silicate measured at each entry point to the distribution system. (iv) If a corrosion inhibitor is used, a minimum orthophosphate or silicate concentration measured in all tap samples that the State determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system. When orthophosphate is used, such a concentration shall be equal to or greater than 1.0 mg/L as orthophosphate, unless the State determines that meeting an orthophosphate residual of 1.0 mg/L is not technologically feasible or is not necessary for the system to optimize corrosion control. (v) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples. (vi) The values for the applicable water quality control parameters, previously listed in this section, shall be those that the State determines to reflect optimal corrosion control treatment for the water system. The State may designate values for additional water quality control parameters determined by the State to reflect optimal corrosion control for the water system. The State shall notify the system in writing of these determinations and explain the basis for its decisions.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Continued operation and monitoring. All systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f) of this section, in accordance with this paragraph for all samples collected under §141.87(d) through (f). Compliance with the requirements of this paragraph shall be determined every six months, as specified under §141.87(d). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any State-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the State. Daily values are calculated as follows. States have discretion to delete results of obvious sampling errors from this calculation. (1) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both. If EPA has approved an alternative formula under §142.16 of this chapter in the State's application for a program revision submitted pursuant to §142.12 of this chapter, the State's formula shall be used to aggregate multiple measurements taken at a sampling point for the water quality parameter in lieu of the formula in this paragraph. (2) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement. (3) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.	§141.82(g)	§141.82(g)(1)	(g) *Continued operation and monitoring for optimal corrosion control treatment and re-optimized corrosion control treatment*. (1) All systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f)(1) of this section, in accordance with this paragraph for all samples collected under § 141.87(d) through (f). The requirements of this paragraph (g) apply to all systems, including consecutive systems that distribute water that has been treated to control corrosion by another system. Any water system with optimal corrosion control treatment or re-optimized corrosion control treatment that is not required to monitor water quality parameters under § 141.87 shall continue to operate and maintain such treatment. Compliance with the requirements of this paragraph shall be determined every six months, as specified under § 141.87(d). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any State-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the State. Daily values are calculated as follows. States have discretion to delete results of obvious sampling errors from this calculation. (i) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both. If the EPA has approved an alternative formula under § 142.16(d)(1)(ii) of this chapter in the State's application for a program revision submitted pursuant to § 142.12 of this chapter, the State's formula shall be used to aggregate multiple measurements taken at a sampling point for the water quality parameters in lieu of the formula in this paragraph. (ii) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement. (iii) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sampling location.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(g)(2)	(2) All systems re-optimizing corrosion control shall continue to operate and maintain re-optimized corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f)(2) of this section, in accordance with this paragraph for all samples collected under § 141.87(d) through (f). Compliance with the requirements of this paragraph shall be determined every six months, as specified under § 141.87(d). A water system is out of compliance with the requirements of this paragraph for a six-month period if it has excursions for any State-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the State. Daily values are calculated as follows. States have discretion to delete results of obvious sampling errors from this calculation. (i) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both. If the EPA has approved an alternative formula under § 142.16(d)(1)(ii) of this chapter in the State's application for a program revision submitted pursuant to § 142.12 of this chapter, the State's formula shall be used to aggregate multiple measurements taken at a sampling point for the water quality parameters in lieu of this formula in this paragraph. (ii) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement. (iii) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sampling location.	
Modification of State treatment decisions. Upon its own initiative or in response to a request by a water system or other interested party, a State may modify its determination of the optimal corrosion control treatment under paragraph (d) of this section or optimal water quality control parameters under paragraph (f) of this section. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The State may modify its determination where it concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the State's decision, and provide an implementation schedule for completing the treatment modifications.	§141.82(h)		(h) *Modification of State treatment decisions for optimal corrosion control and re-optimized corrosion control*. Upon its own initiative or in response to a request by a water system or other interested party, a State may modify its determination of the optimal corrosion control treatment under paragraph (d)(1), (d)(2) ,(d)(3), or (d)(4) of this section, or optimal water quality control parameters under paragraph (f)(1) or (f)(2) of this section. A request for modification by a system or other interested party shall be in writing, explaining why the modification is appropriate, and providing supporting documentation. The State may modify its determination where it concludes that such change is necessary to ensure that the water system continues to optimize corrosion control treatment re-optimized corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements and/or water quality parameters, explain the basis for the State's decision, and provide an implementation schedule for completing the treatment modifications for re-optimized corrosion control treatment.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(i)	(i) *Treatment decisions by the EPA in lieu of the State on optimal corrosion control treatment and re-optimized corrosion control treatment*. (1) Pursuant to the procedures in § 142.19 of this chapter, the EPA Regional Administrator may review optimal corrosion control treatment determinations made by a State under paragraph (d)(1), (d)(2), (d)(3), (d)(4), (f)(1), (f)(2), or (h) of this section and issue Federal treatment determinations consistent with the requirements of those paragraphs where the Regional Administrator finds that: (i) A State has failed to issue a treatment determination by the applicable deadlines contained in § 141.81. (ii) A State has abused its discretion in a substantial number of cases or in cases affecting a substantial population; or (iii) The technical aspects of a State's determination would be indefensible in an expected Federal enforcement action taken against a water system.	
		§141.82(j)	(j) *Find-and-fix assessment for tap sample sites that exceed the lead action level*. The water system shall conduct the following steps, when a tap sample site exceeds the lead action level under monitoring conducted under § 141.86.	
		§141.82(j)(1)	(1) *Step 1*. The water system shall sample at a new water quality parameter site that is on the same size water main in the same pressure zone and located within a half mile of the location with the action level exceedance within 5 days of receiving the sample results. The water system shall measure the following parameters: (i) pH; (ii) Alkalinity; (iii) Orthophosphate, when an inhibitor containing an orthophosphate compound is used; (iv) Silica, when an inhibitor containing a silicate compound is used; and (v) Water systems with an existing water quality parameter location that meets the requirements of this section can conduct this sampling at that location. All water systems required to meet optimal water quality control parameters shall add new sites to the minimum number of sites as described in § 141.87(g).	
		§141.82(j)(2)	(2) *Step 2*. Water systems shall collect a follow-up sample at any tap sample site that exceeds the action level within 30 days of receiving the sample results. These follow-up samples may use different sample volumes or different sample collection procedures to assess the source of elevated lead levels. Samples collected under this section shall be submitted to the State but shall not be included in the 90th percentile calculation for compliance monitoring under § 141.86. If the water system is unable to collect a follow-up sample at a site, the water system shall provide documentation to the State, explaining why it was unable to collect a follow-up sample.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.82(j)(3)	(3) *Step 3*. Water systems shall evaluate the results of the monitoring conducted under this paragraph to determine if either localized or centralized adjustment of the optimal corrosion control treatment (initial, modified, or re-optimized) is necessary and submit the recommendation to the State within six months after the end of the monitoring period in which the site(s) exceeded the lead action level. Corrosion control treatment modification may not be necessary to address every exceedance. Water systems shall note if the cause of the elevated lead level if known in their recommendation to the State.	
		§141.82(j)(4)	(4) *Step 4*. The State shall approve the treatment recommendation or specify a different approach within six months of completion of paragraph (j), Step 3 of this section.	
		§141.82(j)(5)	(5) *Step 5*. If the State-approved treatment recommendation requires the water system to adjust the optimal corrosion control treatment process, the water system shall complete modifications to its corrosion control treatment within 12 months after completion of paragraph (j), Step 4 of this section. Systems without corrosion control treatment required to install optimal corrosion control treatment shall follow the schedule in § 141.81(e).	
		§141.82(j)(6)	(6) *Step 6*. Water systems adjusting its optimal corrosion control treatment shall complete follow-up sampling (§ 141.86(d)(2) and § 141.87(c)) within 12 months after completion of paragraph (j), Step 5 of this section.	
		§141.82(j)(7)	(7*) Step 7*. For water systems adjusting its optimal corrosion control treatment, the State shall review the water system's modification of corrosion control treatment and designate optimal water quality control parameters (§ 141.82(f)(1)) within six months of completion of paragraph (j), Step 6 of this section.	
		§141.82(j)(8)	(8) *Step 8*. For water systems adjusting its optimal corrosion control treatment, the water system shall operate in compliance with the State-designated optimal water quality control parameters (§ 141.82(g)(1)) and continue to conduct tap sampling (§§ 141.86(d)(3) and 141.87(d)).	
§141.83 Source water treatment requirements.				
Deadlines for completing source water treatment steps	§141.83(a)			
(1) *Step 1:* A system exceeding the lead or copper action level shall complete lead and copper source water monitoring (§141.88(b)) and make a treatment recommendation to the State (§141.83(b)(1)) no later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded.	§141.83 (a)(1)			
(2) *Step 2:* The State shall make a determination regarding source water treatment (§141.83(b)(2)) within 6 months after submission of monitoring results under step 1.	§141.83 (a)(2)			
(3) *Step 3:* If the State requires installation of source water treatment, the system shall install the treatment (§141.83(b)(3)) within 24 months after completion of step 2.	§141.83 (a)(3)			
(4) *Step 4:* The system shall complete follow-up tap water monitoring (§141.86(d)(2) and source water monitoring (§141.88(c)) within 36 months after completion of step 2.	§141.83 (a)(4)			
(5) *Step 5:* The State shall review the system's installation and operation of source water treatment and specify maximum permissible source water levels (§141.83(b)(4)) within 6 months after completion of step 4.	§141.83 (a)(5)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(6) *Step 6:* The system shall operate in compliance with the State-specified maximum permissible lead and copper source water levels (§141.83(b)(4)) and continue source water monitoring (§141.88(d)).	§141.83 (a)(6)			
Description of source water treatment requirements	§141.83(b)			
(1) *System treatment recommendation.* Any system which exceeds the lead or copper action level shall recommend in writing to the State the installation and operation of one of the source water treatments listed in paragraph (b)(2) of this section. A system may recommend that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.	§141.83 (b)(1)			
(2) *State determination regarding source water treatment.* The State shall complete an evaluation of the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the State determines that treatment is needed, the State shall either require installation and operation of the source water treatment recommended by the system (if any) or require the installation and operation of another source water treatment from among the following: Ion exchange, reverse osmosis, lime softening or coagulation/filtration. If the State requests additional information to aid in its review, the water system shall provide the information by the date specified by the State in its request. The State shall notify the system in writing of its determination and set forth the basis for its decision.	§141.83 (b)(2)			
(3) *Installation of source water treatment.* Each system shall properly install and operate the source water treatment designated by the State under paragraph (b)(2) of this section.	§141.83 (b)(3)			
(4) *State review of source water treatment and specification of maximum permissible source water levels.* The State shall review the source water samples taken by the water system both before and after the system installs source water treatment, and determine whether the system has properly installed and operated the source water treatment designated by the State. Based upon its review, the State shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The State shall notify the system in writing and explain the basis for its decision.	§141.83 (b)(4)			
(5) *Continued operation and maintenance.* Each water system shall maintain lead and copper levels below the maximum permissible concentrations designated by the State at each sampling point monitored in accordance with §141.88. The system is out of compliance with this paragraph if the level of lead or copper at any sampling point is greater than the maximum permissible concentration designated by the State.	§141.83 (b)(5)			
(6) *Modification of State treatment decisions.* Upon its own initiative or in response to a request by a water system or other interested party, a State may modify its determination of the source water treatment under paragraph (b)(2) of this section, or maximum permissible lead and copper concentrations for finished water entering the distribution system under paragraph (b)(4) of this section. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The State may modify its determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in source water. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the State's decision, and provide an implementation schedule for completing the treatment modifications.	§141.83 (b)(6)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
§141.84 Lead service line replacement requirements.				
Applicability Systems that fail to meet the lead action level in tap samples taken pursuant to §141.86(d)(2), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of §141.81 or §141.83 for failure to install source water or corrosion control treatment, the State may require the system to commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under §141.86(d)(2) has passed.	§141.84(a)		(a) *Lead service line inventory.* All water systems must develop and maintain a publicly accessible inventory of lead service lines and service lines of unknown materials in its distribution system. The inventory must meet the following requirements:	
		§141.84(a)(1)	(1) *Deadlines.* All water systems must develop the initial inventory by **[DATE 3 YEARS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and submit it to the primacy agency in accordance with § 141.90.	
		§141.84(a)(2)	(2) A water system shall use the information on lead and galvanized steel that it is required to collect under §141.42(d) of this part when conducting the inventory of service lines in its distribution system for the initial inventory under paragraph (1). The water system shall also review the sources of information listed below to identify service line materials for the initial inventory. In addition, the water system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities): (i) All plumbing codes, permits, and records in the files of the building department(s) which indicate the service line materials used to connect water system- and customer-owned structures to the distribution system. (ii) All water system records, including distribution system maps and drawings, historical records on each service connection, meter installation records, historical capital improvement or master plans, and standard operating procedures. (iii) All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system. (iv) Any resource required by the State to asses service line materials for structures built prior to 1989.	
		§141.84(a)(3)	(3) The initial inventory must include all service lines connected to the public water distribution system regardless of ownership status (e.g., where service line ownership is shared, the inventory would include both the portion of the service line owned by the water system and the customer-owned portion of the service line). Service lines shall be categorized in the following manner: (i) Lead where either the water system portion, customer portion or both portions of the service line are made of lead or where the customer-owned portion is a galvanized pipe where the water system's portion is or was a lead service line. (ii) Non-lead where both the water system portion and customer portion are non-lead; (iii) Unknown where the service line material is only known to be non-lead on either the water system portion or the customer portion of the service line or the service line material for both portions of the line is unknown.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.84(a)(4)	(4) Systems shall update the inventory on an annual basis to address any lead service line replacement or service line material identification at sites with lines characterized as unknown. The updated inventory shall be submitted to the State on an annual basis.	
		§141.84(a)(5)	(5) Service lines listed as unknown in the initial inventory or the updated inventory in paragraph (4) of this section must be counted as lead service lines for purposes of calculating lead service line replacement rates as well as for issuing targeted public education to consumers served by a lead or unknown service line. (i) These service lines must be considered lead service lines unless they are demonstrated to be non-lead by records or physical examination. (ii) Service lines of unknown material shall not be used for Tier 1 sampling sites. (iii) When a service line initially listed as a lead service line on an inventory is later determined to be non-lead, the water system must update its inventory and shall subtract it from the number of lead service lines used to calculate lead service line replacement rates. Such service lines must not be considered replaced. (iv) Service lines initially characterized as non-lead that are later found to be made of lead on either the system or customer portion shall be re-characterized as a lead service line and added to the number of lead service lines used to calculate the lead service line replacement rates.	
		§141.84(a)(5) again…	(5) The primacy agency may designate acceptable methods to determine the service line material of unknown lines.	
		§141.84(a)(6)	(6) All water systems with lead service lines must make its inventory publicly accessible. (i) The inventory must include a location identifier, such as a street, intersection, or landmark, served by each lead service line. Water systems are not required to list the exact address of each lead service line. (ii) Water systems serving greater than 100,000 persons must make the inventory available electronically.	
A water system shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under §141.86(a) and relevant legal authorities (e.g., contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded under paragraph (a) of this section. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.	§141.84 (b)(1)	§141.84 (b)	(b) *Lead service line replacement plan.* All water systems with lead service lines in their distribution system shall, by [INSERT DATE 3 YEARS AFTER PUBLICATION OF FINAL RULE IN FEDERAL REGISTER], submit a lead service line replacement plan and lead service line inventory to the primacy agency described in paragraph (a) of this section. The plan must include procedures to conduct full lead service line replacement, a strategy for informing customers before a full or partial lead service line replacement, a lead service line replacement goal rate in the event of a lead trigger level exceedance, a pitcher filter tracking and maintenance system, a procedure for customers to flush service lines and premise plumbing of particulate lead, and a funding strategy for conducting lead service line replacements.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any water system resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed by paragraph (f) of this section shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under paragraph (c) of this section. The system will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that must be replaced per year (7 percent lead service line replacement is based on a 15-year replacement program, so, for example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the updated inventory by 13). For those systems that have completed a 15-year lead service line replacement program, the State will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the system re-exceeds the action level.	§141.84 (b)(2)			
A system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken pursuant to §141.86(b)(3), is less than or equal to 0.015 mg/L.	§141.84(c)	§141.84(c)(1)	(c) *Operating procedures for replacing lead goosenecks, pigtails, or connectors.* (1) The water system must replace any lead gooseneck, pigtail, or connector it owns when encountered during emergency repairs or planned water system infrastructure work.	
		§141.84(c)(2)	(2) The water system must offer to replace a customer-owned lead gooseneck, pigtail, or connector; however, the water system is not required to bear the cost of replacement of the customer-owned parts.	
		§141.84(c)(3)	(3) The water system is not required to replace a customer-owned lead gooseneck, pigtail, or connector if the customer objects to its replacement.	
		§141.84(c)(4)	(4) The replacement of a lead gooseneck, pigtail, or connector does not count for the purposes of meeting the requirements for goal-based or mandatory lead service line replacements, in accordance with paragraphs (e)(2) and (f)(2) of this section, respectively.	
		§141.84(c)(5)	(5) Upon replacement of any gooseneck, pigtail, or connector that is attached to a lead service line, the water system must follow risk mitigation procedures specified in 141.85(e)(5)(ii).	
A water system shall replace that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner's authorized agent, that the system will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line. A system is not required to bear the cost of replacing the privately-owned portion of the line, nor is it required to replace the privately-owned portion where the owner chooses not to pay the cost of replacing the privately-owned portion of the line, or where replacing the privately-owned portion would be precluded by State, local or common law. A water system that does not replace the entire length of the service line also shall complete the following tasks.	§141.84(d)		(d) *Requirements for conducting lead service line replacement that may result in partial replacement.*	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
At least 45 days prior to commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident(s) of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The State may allow the water system to provide notice under the previous sentence less than 45 days prior to commencing partial lead service line replacement where such replacement is in conjunction with emergency repairs. In addition, the water system shall inform the resident(s) served by the line that the system will, at the system's expense, collect a sample from each partially-replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under §141.86(b)(3), within 72 hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident(s) served by the line within three business days of receiving the results. Mailed notices post-marked within three business days of receiving the results shall be considered “on time.”	§141.84 (d)(1)	§141.84 (d)(1)	(1) Any water system that plans to partially replace a lead service line (*e.g.* replace only the portion of a lead service line that it owns) in coordination with planned infrastructure work must provide notice to the owner of the lead service line, or the owner’s authorized agent, as well as non-owner resident(s) served by the lead service line at least 45 days prior to the replacement. The notice must explain that the system will replace the portion of the line it owns and offer to replace the portion of the service line not owned by the water system. The water system is not required to bear the cost of replacement of the portion of the lead service line not owned by the water system. (i) The water system must provide notification explaining that consumers may experience a temporary increase of lead levels in their drinking water due to the replacement, information about the health effects of lead, and actions consumers can take to minimize their exposure to lead in drinking water. In instances where multi-family dwellings are served by the lead service line to be partially replaced, the water system may elect to post the information at a conspicuous location instead of providing individual notification to all residents. (ii) The water system must provide information about service line flushing in accordance with § 141.84(b). (iii) The water system must provide the consumer with a pitcher filter certified to remove lead, three months of replacement cartridges, and instructions for use. If the lead service line serves more than one residence or non-residential unit (e.g. a multi-unit building), the water system must provide a pitcher filter, three months of replacement cartridges and use instructions to every residence in the building. (iv) The water system must take a follow up tap sample between three months and six months after completion of any partial lead service line replacement. The water system must provide the results of the sample to the consumer in accordance with § 141.85(d).	
The water system shall provide the information required by paragraph (d)(1) of this section to the residents of individual dwellings by mail or by other methods approved by the State. In instances where multi-family dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.	§141.84 (d)(2)	§141.84 (d)(2)	(2) Any water system that replaces the portion of the lead service line it owns due to an emergency repair, must provide notice and risk mitigation measures to the customer served by the lead service line within 24 hours. The water system must provide notification and risk mitigation measure in accordance with (d)(1)(i)-(iv) of this section.	
		§141.84 (d)(3)	(3) A water system must replace the lead service line it owns when it is notified that the customer has replaced the customer-owned portion of the lead service line. When a water system is notified by the customer that he or she intends to replace the customer portion of the lead service line the water system has 45 days from the day of their notification to conduct the replacement of the system-owned portion. The water system must make a good faith effort to coordinate simultaneous replacement. The water system must provide notification and risk mitigation measure in accordance with (d)(1)(i)-(iv) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.84 (d)(4)	(4) When a water system is notified by the customer that he or she has replaced the customer-owned portion and that replacement has occurred within the previous 3 months, the water system must replace its portion within 45 days from the day of their notification. The water system must provide notification and risk mitigation measures in accordance with (d)(1)(i)-(iv) of this section.	
		§141.84 (d)(5)	(5) When a water system is notified by the customer that he or she has replaced the customer-owned portion and the replacement has occurred more than three months in the past, the water system is not required to complete the lead service line replacement of the system-owned portion.	
The State shall require a system to replace lead service lines on a shorter schedule than that required by this section, taking into account the number of lead service lines in the system, where such a shorter replacement schedule is feasible. The State shall make this determination in writing and notify the system of its finding within 6 months after the system is triggered into lead service line replacement based on monitoring referenced in paragraph (a) of this section.	§141.84(e)		(e) *Requirements for conducting full lead service line replacement.* (1) Any water system that conducts a full lead service line replacement (*e.g.* replace both the portion of a lead service line owned by the customer and by the water system) must provide notice to the owner of the lead service line, or the owner's authorized agent, as well as non-owned resident(s) served by the lead service line within 24 hours of the replacement (i) The water system must provide notification explaining that consumers may experience a temporary increase of lead levels in their drinking water due to the replacement, information about the health effects of lead, and actions consumers can take to minimize their exposure to lead in drinking water. In instances where multi-family dwellings are served by the lead service line to be replaced, the water system may elect to post the information at a conspicuous location instead of providing individual notification to all residents. (ii) The water system must provide information about service line flushing in accordance with § 141.84(b). (iii) The water system must provide the consumer with a pitcher filter certified to remove lead, three months of replacement cartridges, and instructions for use. If the lead service line serves more than one residence or non-residential unit (e.g. a multi-unit building), the water system must provide a pitcher filter, three months of replacement cartridges and use instructions to every residence in the building. (iv) The water system must take a follow up tap sample between three months and six months after completion of any partial lead service line replacement. The water system must provide the results of the sample to the consumer in accordance with § 141.85(d).	
Any system may cease replacing lead service lines whenever first draw samples collected pursuant to §141.86(b)(2) meet the lead action level during each of two consecutive monitoring periods and the system submits the results to the State. If first draw tap samples collected in any such system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines pursuant to paragraph (b)(2) of this section.	§141.84(f)		*(f) Water systems whose 90th percentile lead level from tap samples is above the trigger level but at or below the action level.* Water systems whose 90th percentile lead level from tap samples taken pursuant to § 141.86 is above the lead trigger level but at or below the lead action level must conduct goal-based lead service line replacement.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
To demonstrate compliance with paragraphs (a) through (d) of this section, a system shall report to the State the information specified in §141.90(e).	§141.84(f)	§141.84(f)(1)	(1) Within six months following completion of the initial invention, pursuant to paragraph (a) of this section, water systems serving over 10,000 persons must determine a goal rate at which it will replace lead service lines after their 90th percentile lead level exceeds of the trigger level but is below the lead action level. This lead service line replacement goal rate must be approved by the State pursuant to (b) of this section.	
		§141.84(f)(2)	(2) Water systems must apply the goal replacement rate to the initial number of lead service lines, including service lines of unknown material, in the water system's LSL inventory. If the water system at any time determines a service line of unknown material is non-lead, the water system may subtract it from the initial number of lead service lines used for calculating the lead service line replacement rate.	
		§141.84(f)(3)	(3) Lead service line replacement must be conducted in accordance with the requirements of paragraphs (d) or (e) of this section.	
		§141.84(f)(4)	(4) Only full lead service line replacements count towards a water system's annual replacement goal. Partial lead service line replacements do not count towards the goal.	
		§141.84(f)(5)	(5) The water system must provide notification to customers with lead service lines as required in § 141.85(f).	
		§141.84(f)(6)	(6) Any water system that fails to meet its lead service line replacement goal must: (i) Conduct public outreach activities pursuant to § 141.85(g) until either the water system meets its replacement goal, or tap sampling shows the 90th percentile of lead is below the trigger level for two consecutive monitoring periods. (ii) Recommence its goal-based lead service line replacement program pursuant to this paragraph if the 90th percentile lead value anytime thereafter exceeds the lead trigger level.	
		§141.84(f)(7)	(7) The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the lead action level was exceeded. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.	
		§141.84(f)(8)	(8) Pursuant to the procedures in § 142.19, the EPA Regional Administrator may review the lead service line replacement goal rate determination made by a State under paragraph § 141.84(b) of this section and issue a Federal goal-based lead service line replacement rate determination where the Regional Administrator finds that a higher goal-based lead service line replacement rate is feasible for a water system.	
		§141.84(g)	*(g) Lead service line replacement for water systems that exceed the lead action level in tap samples.* Water systems that exceed the lead action level in tap samples taken pursuant to § 141.86 must replace full lead service lines at a minimum annual rate.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.84(g)(1)	(1) Water systems must annually replace three percent of the initial number of lead service lines in the inventory, including service lines of unknown material at time of the action level exceedance. The water system must meet the replacement rate with full lead service line replacements but is not required to bear the cost of removal of the portion of the lead service line it does not own. If the water system later determines a service line of unknown material is non-lead, the water system may subtract it from the initial number of lead service lines used for calculating the lead service line replacement rate.	
		§141.84(g)(2)	(2) Lead service line replacement must be conducted in accordance with the requirements of paragraphs (c) or (d) of this section.	
		§141.84(g)(3)	(3) Only full lead service line replacements count towards a water system's mandatory replacement rate. Partial lead service line replacements do not count towards the mandatory replacement rate.	
		§141.84(g)(4)	(4) Water systems must conduct notification to customers with lead service lines as required in § 141.85(f).	
		§141.84(g)(5)	(5) Community water systems serving 10,000 or fewer persons may elect to conduct a corrosion control treatment or point-of-use filter compliance approach as described in section § 141.93 instead of lead service line replacement. Non-transient non-community water systems may elect to conduct a corrosion control treatment, point-of-use filter compliance approach, or choose a replacement of lead-bearing plumbing approach, as described in section § 141.93.	
		§141.84(g)(6)	(6) A water system may cease mandatory lead service line replacement when its lead 90th percentile level, calculated under § 141.80(c)(4), is at or below the lead action level during each of four consecutive monitoring periods. If first draw tap samples collected in any such system thereafter exceed the lead action level, the system shall recommence mandatory lead service line replacement.	
		§141.84(g)(7)	(7) The water system may cease mandatory lead service line replacement if it obtains refusal to conduct full lead service line replacement from every customer in its distribution area served by a lead service line on the customer's portion. If the water system exceeds the action level again, it must reach out to any customers served by a lead service line where there has been a change in residents with an offer to replace the customer-owned portion. The water system is not required to bear the cost of replacement of the customer-owned lead service line.	
		§141.84(g)(8)	(8) The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which lead action level was exceeded under paragraph (a) of this section. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the State has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.84(g)(9)	(9) The State shall require a system to replace lead service lines on a shorter schedule than that required by this section, taking into account the number of lead service lines in the system, where a shorter replacement schedule is feasible. The State shall make this determination in writing and notify the system of its finding within six months after the system is required to begin lead service line replacement based on monitoring referenced in paragraph (f) of this section.	
		§141.84(h)	(h) *State reporting to demonstrate compliance.* To demonstrate compliance with paragraphs (a) through (f) of this section, a system shall report to the State the information specified in § 141.90(e).	
§141.85 Public education and supplemental monitoring requirements.				
All water systems must deliver a consumer notice of lead tap water monitoring results to persons served by the water system at sites that are tested, as specified in paragraph (d) of this section. A water system that exceeds the lead action level based on tap water samples collected in accordance with §141.86 shall deliver the public education materials contained in paragraph (a) of this section in accordance with the requirements in paragraph (b) of this section. Water systems that exceed the lead action level must sample the tap water of any customer who requests it in accordance with paragraph (c) of this section.	§141.85		All water systems must deliver a consumer notice of lead tap water monitoring results to persons served by the water system at sites that are tested, as specified in paragraph (d) of this section. A water system with lead service lines must deliver public education materials to persons with a lead service line as specified in paragraph (e) and (f) of this section. All water systems must conduct annual outreach to healthcare providers and caregivers as outlined in section (g) of this section. A water system that exceeds the lead action level based on tap water samples collected in accordance with § 141.86 shall deliver the public education materials contained in paragraph (a) of this section and in accordance with the requirements in paragraph (b) of this section. Water systems that exceed the lead action level must sample the tap water of any customer who requests it in accordance with paragraph (c) of this section.	
Content of written public education materials	§141.85(a)			
*Community water systems and non-transient non-community water systems.*Water systems must include the following elements in printed materials (e.g., brochures and pamphlets) in the same order as listed below. In addition, language in paragraphs (a)(1)(i) through (ii) and (a)(1)(vi) of this section must be included in the materials, exactly as written, except for the text in brackets in these paragraphs for which the water system must include system-specific information. Any additional information presented by a water system must be consistent with the information below and be in plain language that can be understood by the general public. Water systems must submit all written public education materials to the State prior to delivery. The State may require the system to obtain approval of the content of written public materials prior to delivery.	§141.85 (a)(1)			
IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. [INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.	§141.85 (a)(1)(i)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.	§141.85 (a)(1)(ii)		*Health effects of lead.* Exposure to lead can cause serious health effects in all age groups. Infants and children who drink water containing lead could have decreases in IQ and attention span and increases in learning and behavior problems. Lead exposure among women who are pregnant increases prenatal risks. Lead exposure among women who later become pregnant has similar risks if lead stored in the mother's bones is released during pregnancy. Recent science suggests that adults who drink water containing lead have increased risks of heart disease, high blood pressure, kidney or nervous system problems.	
Sources of lead.	§141.85 (a)(1)(iii)			
Explain what lead is.	§141.85 (a)(1)(iii)(A)			
Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.	§141.85 (a)(1)(iii)(B)			
Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).	§141.85 (a)(1)(iii)(C)			
Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.	§141.85 (a)(1)(iv)			
Encourage running the water to flush out the lead.	§141.85 (a)(1)(iv)(A)			
Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.	§141.85 (a)(1)(iv)(B)			
Explain that boiling water does not reduce lead levels.	§141.85 (a)(1)(iv)(C)			
Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.	§141.85 (a)(1)(iv)(D)			
Suggest that parents have their child's blood tested for lead.	§141.85 (a)(1)(iv)(E)			
Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.	§141.85 (a)(1)(v)			
For more information, call us at [INSERT YOUR NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT YOUR WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at *http://www.epa.gov/lead* or contact your health care provider.	§141.85 (a)(1)(vi)			
Community water systems. In addition to including the elements specified in paragraph (a)(1) of this section, community water systems must:	§141.85 (a)(2)			
Tell consumers how to get their water tested.	§141.85 (a)(2)(i)			
Discuss lead in plumbing components and the difference between low lead and lead free.	§141.85 (a)(2)(ii)			
Delivery of public education materials.	§141.85(b)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
For public water systems serving a large proportion of non-English speaking consumers, as determined by the State, the public education materials must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the public education materials or to request assistance in the appropriate language.	§141.85 (b)(1)			
A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with §141.86, and that is not already conducting public education tasks under this section, must conduct the public education tasks under this section within 60 days after the end of the monitoring period in which the exceedance occurred:	§141.85 (b)(2)			
Deliver printed materials meeting the content requirements of paragraph (a) of this section to all bill paying customers.	§141.85 (b)(2)(i)			
Contact customers who are most at risk by delivering education materials that meet the content requirements of paragraph (a) of this section to local public health agencies even if they are not located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users. The water system must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver education materials that meet the content requirements of paragraph (a) of this section to all organizations on the provided lists.	§141.85 (b)(2)(ii)(A)			
Contact customers who are most at risk by delivering materials that meet the content requirements of paragraph (a) of this section to the following organizations listed in 1 through 6 that are located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users: (1) Public and private schools or school boards. (2) Women, Infants and Children (WIC) and Head Start programs. (3) Public and private hospitals and medical clinics. (4) Pediatricians. (5) Family planning clinics. (6) Local welfare agencies.	§141.85 (b)(2)(ii)(B)	§141.85 (b)(2)(ii)(B) (1)&(7)	(*1*) Schools, child care facilities and school boards. (*7*) Obstetricians-Gynecologists and Midwives.	
Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements of paragraph (a) of this section to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water system's service area: (*1*) Licensed childcare centers (*2*) Public and private preschools. (*3*) Obstetricians-Gynecologists and Midwives.	§141.85 (b)(2)(ii)(C)		~~Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements of paragraph (a) of this section to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water system's service area:~~ ~~(*1*) Licensed childcare centers~~ ~~(*2*) Public and private preschools.~~ ~~(*3*) Obstetricians-Gynecologists and Midwives.~~	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
No less often than quarterly, provide information on or in each water bill as long as the system exceeds the action level for lead. The message on the water bill must include the following statement exactly as written except for the text in brackets for which the water system must include system-specific information: [INSERT NAME OF WATER SYSTEM] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [INSERT NAME OF WATER SYSTEM] [or visit (INSERT YOUR WEB SITE HERE)]. The message or delivery mechanism can be modified in consultation with the State; specifically, the State may allow a separate mailing of public education materials to customers if the water system cannot place the information on water bills.	§141.85 (b)(2)(iii)			
Post material meeting the content requirements of paragraph (a) of this section on the water system's Web site if the system serves a population greater than 100,000.	§141.85 (b)(2)(iv)			
Submit a press release to newspaper, television and radio stations.	§141.85 (b)(2)(v)			
In addition to paragraphs (b)(2)(i) through (v) of this section, systems must implement at least three activities from one or more categories listed below. The educational content and selection of these activities must be determined in consultation with the State. (A) Public Service Announcements. (B) Paid advertisements. (C) Public Area Information Displays. (D) E-mails to customers. (E) Public Meetings. (F) Household Deliveries. (G) Targeted Individual Customer Contact. (H) Direct material distribution to all multi-family homes and institutions. (I) Other methods approved by the State.	§141.85 (b)(2)(vi)			
For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the State has established an alternate monitoring period, the last day of that period.	§141.85 (b)(2)(vii)			
As long as a community water system exceeds the action level, it must repeat the activities pursuant to paragraph (b)(2) of this section as described in paragraphs (b)(3)(i) through (iv) of this section.	§141.85 (b)(3)			
A community water system shall repeat the tasks contained in paragraphs (b)(2)(i), (ii) and (vi) of this section every 12 months.	§141.85 (b)(3)(i)			
A community water system shall repeat tasks contained in paragraph (b)(2)(iii) of this section with each billing cycle.	§141.85 (b)(3)(ii)			
A community water system serving a population greater than 100,000 shall post and retain material on a publicly accessible Web site pursuant to paragraph (b)(2)(iv) of this section.	§141.85 (b)(3)(iii)			
The community water system shall repeat the task in paragraph (b)(2)(v) of this section twice every 12 months on a schedule agreed upon with the State. The State can allow activities in paragraph (b)(2) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the State in advance of the 60-day deadline.	§141.85 (b)(3)(iv)			
Within 60 days after the end of the monitoring period in which the exceedance occurred (unless it already is repeating public education tasks pursuant to paragraph (b)(5) of this section), a non-transient non-community water system shall deliver the public education materials specified by paragraph (a) of this section as follows:	§141.85 (b)(4)			
Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and	§141.85 (b)(4)(i)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the non-transient non-community water system. The State may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.	§141.85 (b)(4)(ii)			
For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the State has established an alternate monitoring period, the last day of that period.	§141.85 (b)(4)(iii)			
A non-transient non-community water system shall repeat the tasks contained in paragraph (b)(4) of this section at least once during each calendar year in which the system exceeds the lead action level. The State can allow activities in (b)(4) of this section to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the State in advance of the 60-day deadline.	§141.85 (b)(5)			
A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period conducted pursuant to §141.86. Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.	§141.85 (b)(6)			
A community water system may apply to the State, in writing (unless the State has waived the requirement for prior State approval), to use only the text specified in paragraph (a)(1) of this section in lieu of the text in paragraphs (a)(1) and (a)(2) of this section and to perform the tasks listed in paragraphs (b)(4) and (b)(5) of this section in lieu of the tasks in paragraphs (b)(2) and (b)(3) of this section if:	§141.85 (b)(7)			
The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and	§141.85 (b)(7)(i)			
The system provides water as part of the cost of services provided and does not separately charge for water consumption.	§141.85 (b)(7)(ii)			
A community water system serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:	§141.85 (b)(8)			
With respect to the requirements of paragraph (b)(2)(vi) of this section, a system serving 3,300 or fewer must implement at least one of the activities listed in that paragraph.	§141.85 (b)(8)(i)			
With respect to the requirements of paragraph (b)(2)(ii) of this section, a system serving 3,300 or fewer people may limit the distribution of the public education materials required under that paragraph to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.	§141.85 (b)(8)(i)			
With respect to the requirements of paragraph (b)(2)(v) of this section, the State may waive this requirement for systems serving 3,300 or fewer persons as long as system distributes notices to every household served by the system.	§141.85 (b)(8)(iii)			
Supplemental monitoring and notification of results. A water system that fails to meet the lead action level on the basis of tap samples collected in accordance with §141.86 shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, nor is the system required to collect and analyze the sample itself.	§141.85(c)			
Notification of results	§141.85(d)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Reporting requirement. All water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under the requirements of §141.86 to the persons served by the water system at the specific sampling site from which the sample was taken (e.g., the occupants of the residence where the tap was tested).	§141.85 (d)(1)		(1) Reporting requirement. All water systems must provide a notice of the individual tap results from lead tap water monitoring carried out under the requirements of § 141.86 to the persons served by the water system at the specific sampling site from which the sample was taken (*e.g.*, the occupants of the residence where the tap was tested).	
Timing of notification. A water system must provide the consumer notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.	§141.85 (d)(2)		(2) Timing of notification. A water system must provide the consumer notice as soon as practical, in accordance to the following timeframes: (i) For individual samples that do not exceed the lead action level, no later than 30 days after the water system learns of the tap monitoring results. (ii) For individual samples that exceed the lead action level, no later than 24 hours after the water system learns of the tap monitoring results.	
Content. The consumer notice must include the results of lead tap water monitoring for the tap that was tested, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from §141.153(c).	§141.85 (d)(3)			
Delivery. The consumer notice must be provided to persons served at the tap that was tested, either by mail or by another method approved by the State. For example, upon approval by the State, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information. The system must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.	§141.85 (d)(4)		(4) Delivery. (i) For lead tap sample results that do not exceed the lead action level of 0.015 mg/L, the water systems must provide consumer notice to persons served at the tap that was tested, either by mail or by another method approved by the State. For example, upon approval by the State, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information. The system must provide the notice to consumers, including customers at taps where sampling was conducted. (ii) For tap sample results that exceed the lead action level of 0.015 mg/L, the water systems must provide consumer notice to consumers served at the tap that was tested electronically or by phone or another method approved by the State.	
		§141.85(e)	(e) *Notification of lead service line.*	
		§141.85(e)(1)	(1) *Notification requirements.* All water systems with lead service lines must provide notification to all consumers with a lead service line or a service line of unknown material informing them they have a lead service line or a service line of unknown material.	
		§141.85(e)(2)	(2) *Timing of notification.* A water system must provide the initial notification within 30 days of completion of the lead service line inventory required under § 141.84 and repeat the notification on an annual basis until the customer no longer has a lead service line. For new customers, water systems shall provide the notice at the time of service initiation.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.85(e)(3)(1)	(3) *Content*. (1) Consumers with a confirmed lead service line. The notice must include a statement that the consumer's service line is lead, an explanation of the health effects of lead, steps consumers can take to reduce exposure to lead in drinking water, information about opportunities to replace lead service lines and information about programs that provide innovative financing solutions to assist consumers with replacement of their portion of a lead service line, and a statement that the water system is required to replace its portion of a lead service line when the consumer notifies them they are replacing their owned portion of the lead service line.	
		§141.85(e)(3)(2)	(2) Customers with a service line of unknown material. The notice must include a statement that the customer's service line is of unknown material that may be lead, an explanation of the health effects of lead, steps customers can take to reduce exposure to lead in drinking water and information about opportunities to verify the material of the service line.	
		§141.85(e)(4)	(4) *Delivery.* The notice must be provided to persons served by a lead service line or service ine of unknown material, either by mail or by another method approved by the primacy agency.	
		§141.85(e)(5)	(5) *Notification due to a disturbance of a lead service line*. (i) Water systems that cause disturbance to a lead service line that results in the water being shut off, and without conducting a partial or full lead service line replacement, must provide the consumer with information about the potential for elevated lead in drinking water a result of the disturbance as well as a flushing procedure to remove particulate lead (ii) If the disturbance of a lead service line results from the replacement of the water meter or gooseneck, pigtail, or connector, the water system must comply with the requirements in paragraph (e)(5)(i) of this section as well as provide the consumer with a pitcher filter certified to remove lead, instructions to use the filter, and three months of filter replacement cartridges. (iii) A water system that conducts a partial or full lead service line replacement must comply with the requirements in paragraph (e)(5)(i) of this section as well as provide the consumer with a pitcher filter certified to remove lead, instructions to use the filter, and three months of filter replacement cartridges. (iv) The water system must comply with the requirements of paragraphs (e)(5) of this section before the consumer's water is turned back on after it has been shut off by the water system.	
		§141.85(f)	*(f) Notification of exceedance of the lead trigger level.*	
		§141.85(f)(1)	(1) All water systems with lead service lines that exceed the lead trigger level of 0.010 mg/L must provide customers that have a lead service line information regarding the water system's goal-based lead service line replacement program and opportunities for replacement of the lead service line.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.85(f)(2)	(2) *Timing*. Waters Systems shall send notification within 30 days of the end of the monitoring period in which the trigger level exceedance occurred. Water systems must repeat the notification annually until the results of sampling conducted under §141.86 is at or below the lead trigger level.	
		§141.85(f)(3)	(3) *Delivery*. The notice must be provided to persons served by a lead service line, either by mail or by another method approved by the State.	
		§141.85(g)	(g) *Outreach activities for failure to meet the lead service line replacement goal*.	
		§141.85(g)(1)	(1) In the first year that a water system that does not meet its annual lead service line replacement goal as required under § 141.84, it must conduct one outreach activity from the following list in the following year until the water system meets it replacement goal or until tap sampling shows that the 90th percentile for lead is at or below the trigger level of 0.010 mg/L. Any water system that thereafter continues to fail to meet its lead service line replacement goal must conduct two outreach activities per year from the following list: (i) Conduct social media campaign. (ii) Contact organizations representing plumbers and contractors by mail to provide information about lead in drinking water including health effects, sources of lead, and the importance of using lead free plumbing materials. Send certified mail to customers with a lead service line to inform them about the water system's goal-based lead service line replacement program and opportunities for replacement of the lead service line. (iv) Conduct a town hall meeting or participate in a community event to provide information about its lead service line replacement program and distribute public education materials. (v) Visit targeted customers to discuss the lead service line replacement program and opportunities for replacement. (vi) In the case where all lead service line customers refuse to participate in the lead service line replacement program, obtain a signed letter from each customer stating such refusal.	
		§141.85(h)	*(h) Public education to local and State health agencies.*	
		§141.85(h)(1)	(1) All water systems shall provide public education materials that meet the content requirements of paragraph (a)(1) of this section.	
		§141.85(h)(2)	(2) Timing. Water systems must send public education materials no later than January 15 of each calendar year.	
		§141.85(h)(3)	(3) Delivery. Water systems shall send public education materials or provide public education by mail or by another method approved by the State.	
§141.86 Monitoring requirements for lead and copper in tap water.				
Sample site location.	§141.86(a)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
By the applicable date for commencement of monitoring under paragraph (d)(1) of this section, each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this section, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in paragraph (c) of this section. All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.	§141.86 (a)(1)		(1) By the applicable date for commencement of monitoring under paragraph (d)(1) of this section, each water system shall complete a lead service line inventory of its distribution system and identify a pool of targeted sampling sites that meet the requirements of this section, and which is sufficiently large enough to ensure that the water system can collect the number of lead and copper tap samples required in paragraph (c) of this section. Water systems with lead service lines or service lines of unknown material must re-evaluate the tap sampling locations based on a lead service line inventory conducted under § 141.84(a), which must be updated annually thereafter, including identifying any changes to the sampling locations. Sites may not include faucets that have point-of-use (POU) or point-of-entry (POE) treatment devices designed to remove inorganic contaminants, except for systems monitoring under § 141.93 (Small System Compliance Flexibility). Lead and copper sampling results for systems monitoring under 141.93(c)(3) and (d)(3) may not be used for the purposes of meeting the criteria for reduced monitoring specified in (d)(4) of this section.	
A water system shall use the information on lead, copper, and galvanized steel that it is required to collect under §141.42(d) of this part [special monitoring for corrosivity characteristics] when conducting a materials evaluation. When an evaluation of the information collected pursuant to §141.42(d) is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in paragraph (a) of this section, the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):	§141.86 (a)(2)		(2) A water system shall use the information on lead, copper, and galvanized steel that is required to be collected under § 141.42(d) of this chapter (special monitoring for corrosivity characteristics) when conducting a materials evaluation. A water system shall use the information on lead service lines that is required to be collected under § 141.84(a) to identify potential lead service line sampling sites. When an evaluation of the information collected pursuant to § 141.42(d) and 141.84(a) is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in paragraph (a) of this section, the water system shall review the sources of information listed below to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (*e.g.*, checking service line materials when reading water meters or performing maintenance activities):	
All plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system;	§141.86 (a)(2)(i)		(i) All plumbing codes, permits, and records in the files of the building department(s) that indicate the plumbing materials that are installed within publicly and privately-owned structures connected to the distribution system;	
All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and	§141.86 (a)(2)(ii)		(ii) All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and	
All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.	§141.86 (a)(2)(iii)		(iii) All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.	
The sampling sites selected for a community water system's sampling pool (“tier l sampling sites”) shall consist of single family structures that: (i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or (ii) Are served by a lead service line. When multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool.	§141.86 (a)(3)		(3) The sampling sites selected for a community water system's sampling pool (“Tier 1 sampling sites”) shall consist of single-family structures that are served by a lead service line. When multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its Tier 1 sampling pool, if served by a lead service line. Service lines of unknown material must not be used as Tier 1 sampling sites.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with “tier 2 sampling sites”, consisting of buildings, including multiple-family residences that: (i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or (ii) Are served by a lead service line.	§141.86 (a)(4)		(4) Any community water system with insufficient Tier 1 sampling sites shall complete its sampling pool with “Tier 2 sampling sites,” consisting of buildings, including multiple-family residences that are served by a lead service line.	
Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with “tier 3 sampling sites”, consisting of single family structures that contain copper pipes with lead solder installed before 1983. A community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.	§141.86 (a)(5)		(5) Any community water system with insufficient Tier 1 and Tier 2 sampling sites shall complete its sampling pool with “Tier 3 sampling sites,” consisting of single-family structures that contain copper pipes with lead solder.	
The sampling sites selected for a non-transient noncommunity water system (“tier l sampling sites”) shall consist of buildings that: (i) Contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or (ii) Are served by a lead service line.	§141.86 (a)(6)		(6) A community water system with insufficient Tier 1, Tier 2, and Tier 3 sampling sites shall complete its sampling pool with “Tier 4 sampling sites,” consisting of single-family structures or buildings, including multiple family residences that are representative of sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.	
A non-transient non-community water system with insufficient tier 1 sites that meet the targeting criteria in paragraph (a)(6) of this section shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete the sampling pool, the non-transient non-community water system shall use representative sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.	§141.86 (a)(7)		(7) The sampling sites selected for a non-transient non-community water system (“Tier 1 sampling sites”) shall consist of buildings that are served by a lead service line. Service lines of unknown material must not be used as Tier 1 sampling sites.	
Any water system whose distribution system contains lead service lines shall draw 50 percent of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of the samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall collect first-draw samples from all of the sites identified as being served by such lines.	§141.86 (a)(8)		(8) A non-transient non-community water system with insufficient Tier 1 sites that meet the targeting criteria in paragraph (a)(7) of this section shall complete its sampling pool with “Tier 3 sampling sites,” consisting of sampling sites that contain copper pipes with lead solder.	
		§141.86(a)(9)	(9) A non-transient non-community water system with insufficient Tier 1 and Tier 3 sampling sites shall complete its sampling pool with “Tier 4 sampling sites,” consisting of sampling sites that are representative of sites throughout the distribution system. For the purpose of this paragraph, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.	
		§141.86 (a)(10)	(10) Any water system whose distribution system contains lead service lines shall collect all samples for monitoring under this section from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by lead service lines shall still collect samples from every site served by a lead service line, and collect the remaining samples in accordance with tiering requirements under (a)(2)(iii) of this section. .	
Sample collection methods.	§141.86(b)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
All tap samples for lead and copper collected in accordance with this subpart, with the exception of lead service line samples collected under §141.84(c) and samples collected under paragraph (b)(5) of this section, shall be first-draw samples.	§141.86 (b)(1)		(1) All tap samples for lead and copper collected in accordance with this subpart, with the exception of samples collected under paragraph (b)(5) and paragraph (h) of this section, shall be first draw samples.	
Each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. First-draw samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in lieu of first-draw samples pursuant to paragraph (b)(5) of this section shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this paragraph. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.	§141.86 (b)(2)		(2) Each first-draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. Bottles used to collect these samples shall be wide-mouth one-liter sample bottles. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be one liter in volume and collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in lieu of first-draw samples pursuant to paragraph (b)(5) of this section shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this paragraph. Sampling instructions provided to customers shall not include instructions for aerator removal and cleaning or flushing of taps prior to the start of the minimum six-hour stagnation period. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected. After acidification to re-solubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.	
Each service line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours. Lead service line samples shall be collected in one of the following three ways: (i) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line; (ii) Tapping directly into the lead service line; or (iii) If the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.	§141.86 (b)(3)		(3) [RESERVED]	
A water system shall collect each first draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.	§141.86 (b)(4)			

<table>
<tr><th>Federal Requirement</th><th>Federal Citation</th><th>Revised Citation</th><th>New/Revised Regulation</th><th>Difference between STR and LTR Regulation</th></tr>
<tr><td>A non-transient non-community water system, or a community water system that meets the criteria of §141.85(b)(7), that does not have enough taps that can supply first-draw samples, as defined in §141.2, may apply to the State in writing to substitute non-first-draw samples. Such systems must collect as many first-draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The State has the discretion to waive the requirement for prior State approval of non-first-draw sample sites selected by the system, either through State regulation or written notification to the system.</td><td>§141.86 (b)(5)</td><td></td><td></td><td></td></tr>
<tr><td>Number of samples. Water systems shall collect at least one sample during each monitoring period specified in paragraph (d) of this section from the number of sites listed in the first column (“standard monitoring”) of the table in this paragraph. A system conducting reduced monitoring under paragraph (d)(4) of this section shall collect at least one sample from the number of sites specified in the second column (“reduced monitoring”) of the table in this paragraph during each monitoring period specified in paragraph (d)(4) of this section. Such reduced monitoring sites shall be representative of the sites required for standard monitoring. A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of paragraph (a) of this section to reach the required number of sample sites listed in paragraph (c) of this section, must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the State may allow these public water systems to collect a number of samples less than the number of sites specified in paragraph (c) of this section, provided that 100 percent of all taps that can be used for human consumption are sampled. The State must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the State. States may specify sampling locations when a system is conducting reduced monitoring. The table is as follows:</td><td>§141.86(c)</td><td></td><td></td><td></td></tr>
<tr><td>Federal Standard:<table><tr><th>System size (number of people served)</th><th>Number of sites (standard monitoring)</th><th>Number of sites (reduced monitoring)</th></tr><tr><td>>100,000</td><td>100</td><td>50</td></tr><tr><td>10,001 to 100,000</td><td>60</td><td>30</td></tr><tr><td>3,301 to 10,000</td><td>40</td><td>20</td></tr><tr><td>501 to 3,300</td><td>20</td><td>10</td></tr><tr><td>101 to 500</td><td>10</td><td>5</td></tr><tr><td>≤100</td><td>5</td><td>5</td></tr></table></td><td></td><td></td><td></td></tr>
<tr><td>Timing of monitoring</td><td>§141.86(d)</td><td></td><td></td><td></td></tr>
<tr><td>Initial tap sampling. The first six-month monitoring period for small, medium-size and large systems shall begin on the following dates:</td><td>§141.86 (d)(1)</td><td></td><td></td><td></td></tr>
</table>

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
<table><tr><th>System size (No. people served)</th><th>First six-month monitoring period begins on</th></tr><tr><td>>50,000</td><td>January 1, 1992.</td></tr><tr><td>3,301 to 50,000</td><td>July 1, 1992.</td></tr><tr><td>≤3,300</td><td>July 1, 1993.</td></tr></table>				
All large systems shall monitor during two consecutive six-month periods.	§141.86 (d)(1)(i)		(i) All water systems with lead service lines deemed optimized under § 141.81(b)(3) and systems that did not conduct monitoring that meets the requirements of this section prior to the compliance date of this section must begin the first six-month monitoring period on January 1 in the year following the compliance date of this section.	
All small and medium-size systems shall monitor during each six-month monitoring period until: (A) The system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under §141.81, in which case the system shall continue monitoring in accordance with paragraph (d)(2) of this section, or (B) The system meets the lead and copper action levels during two consecutive six-month monitoring periods, in which case the system may reduce monitoring in accordance with paragraph (d)(4) of this section.	§141.86 (d)(1)(ii)		(ii) Systems that conducted monitoring that meets the requirements of this section prior to the effective date of this section shall conduct the next round of monitoring on the following schedules based on the results of that monitoring: (A) Systems that exceed the action levels for lead or copper shall begin the first six-month monitoring period on January 1 in the year following the effective date of this section. (B) Systems that exceed the lead trigger level and meet the lead and copper action levels shall begin the first annual monitoring period on January 1 in the year following the effective date of this section. Samples shall be analyzed for lead on an annual basis. Samples shall be analyzed for copper on a triennial basis. Systems without corrosion control treatment that meet the lead trigger level in three annual monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section. (C) Lead service line systems that do not exceed the lead trigger level and copper action level shall begin the next annual monitoring period on January 1 of the year following the effective date of this section. Samples shall be analyzed for lead on an annual basis. Samples shall be analyzed for copper on a triennial basis. Systems that do not exceed the lead trigger level in three annual monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section. (D) Systems without lead service lines that do not exceed the lead trigger level and the copper action level shall begin the next triennial monitoring period within three calendar years of the previous round.	
Monitoring after installation of corrosion control and source water treatment.	§141.86 (d)(2)			
Any large system which installs optimal corrosion control treatment pursuant to §141.81(d)(4) shall monitor during two consecutive six-month monitoring periods by the date specified in §141.81(d)(5).	§141.86 (d)(2)(i)		(i) Any water system that installs or re-optimizes corrosion control treatment shall continue to monitor for lead and copper every six months until the State specifies water quality parameter values for optimal corrosion control.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any small or medium-size system which installs optimal corrosion control treatment pursuant to §141.81(e)(5) shall monitor during two consecutive six-month monitoring periods by the date specified in §141.81(e)(6).	§141.86 (d)(2)(ii)		(ii) Any system that re-optimizes corrosion control treatment as a result of exceeding the lead trigger level shall monitor annually for lead. Samples shall be analyzed for copper on a triennial basis. Small and medium-size systems for which the State did not specify water quality control parameters under § 141.82 that meet the lead trigger level in three annual monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.	
Any system which installs source water treatment pursuant to §141.83(a)(3) shall monitor during two consecutive six-month monitoring periods by the date specified in §141.83(a)(4).	§141.86 (d)(2)(iii)		(iii) Any system that installs source water treatment pursuant to § 141.83(a)(3) shall monitor every six months until the system meets the lead and copper action levels for two consecutive six-month monitoring periods. Systems that meet the lead and copper action levels, but not the lead trigger level for two consecutive 6-month monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.	
Monitoring after State specifies water quality parameter values for optimal corrosion control. After the State specifies the values for water quality control parameters under §141.82(f), the system shall monitor during each subsequent six-month monitoring period, with the first monitoring period to begin on the date the State specifies the optimal values under §141.82(f).	§141.86 (d)(3)	§141.86(d)(3)(i)	(i) After the State specifies the values for water quality control parameters under § 141.82(f), all large and any small or medium size systems that exceeded an action level shall continue to monitor every six months until the system does not exceed the lead and copper action levels for two consecutive 6-month monitoring periods. Systems that do not exceed the lead and copper action levels, but exceed the lead trigger level (>10 μg/L) shall monitor annually at the standard number of sites listed in (c) of this section. Systems that do not exceed the lead trigger level and copper action level in three annual monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.	
		§141.86(d)(3)(ii)	(ii) Any small or medium size system which exceeded the lead trigger level for which the State has specified water quality parameter values for optimal corrosion control treatment shall continue to monitor every six months until the system meets the lead and copper action levels for two consecutive 6-month monitoring periods. Systems that do not exceed the lead and copper action levels, but exceed the lead trigger level shall monitor annually at the standard number of sites listed in (c) of this section. Systems that do not exceed the lead trigger level and copper action level in three annual monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.	
Reduced monitoring.	§141.86 (d)(4)		(4) *Reduced Monitoring based on 90th percentile lead levels*.	
A small or medium-size water system that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with paragraph (c) of this section, and reduce the frequency of sampling to once per year. A small or medium water system collecting fewer than five samples as specified in paragraph (c) of this section, that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the frequency of sampling to once per year. In no case can the system reduce the number of samples required below the minimum of one sample per available tap. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.	§141.86 (d)(4)(i)	§141.86 (d)(4)(i)(A)	(i) (A) A small or medium-size system that meets the lead trigger level and copper action level under paragraph (d)(1)(i) of this section may reduce the frequency of sampling to annual monitoring. This monitoring shall begin in the calendar year immediately following the end of the second consecutive 6-month monitoring period.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.86 (d)(4)(i)(B)	(B) A small or medium-size water system that meets the lead trigger level and copper action level under paragraph (d)(1)(ii) (D) of this section may reduce the number of samples in accordance with paragraph (c) of this section and reduce the sampling frequency to triennial monitoring. This monitoring shall begin during the calendar year three years after the monitoring conducted under paragraph (d)(1)(ii)(D) of this section. A small or medium system collecting fewer than five samples as specified in paragraph (c) of this section that meets the lead trigger level and copper action level under paragraph (d)(1)(ii)(D) of this section may reduce the sampling frequency to triennial monitoring. In no case may the system reduce the number of samples below the minimum of one sample per available tap. This monitoring shall begin during the calendar year three years after the monitoring conducted under paragraph (d)(1)(ii)(D) of this section.	
		§141.86 (d)(4)(i)(C)	(C) Any small or medium-size system without corrosion control treatment that exceeds the lead trigger level, but meets copper action level, shall collect the standard number of samples on an annual basis. This sampling shall begin in the calendar year following the monitoring conducted under paragraph (d)(1)(i) or (d)(1)(ii)(B) of this section. A small or medium system collecting fewer than five samples as specified in paragraph (c) of this section that meets the lead trigger level and copper action level under paragraph (d)(1)(i) or (d)(1)(ii)(D) of this section shall collect the standard number of samples on an annual basis. In no case may the system reduce the number of samples below the minimum of one sample per available tap. This sampling shall begin in the calendar year following the monitoring conducted under paragraph (d)(1)(i) or (d)(1)(ii)(B) of this section.	
		§141.86 (d)(4)(i)(D)	(D) Any small or medium-size system with corrosion control treatment that exceeds the lead trigger level but meets the lead and copper action levels and is not required by the State to make changes to the corrosion control treatment as a result of the re-optimization assessment under § 141.82, shall collect the standard number of samples on an annual basis. This sampling shall begin in the calendar year following the monitoring conducted under paragraph (d)(1)(i) or (d)(1)(ii)(B) of this section. A small or medium system collecting fewer than five samples as specified in paragraph (c) of this section that meets the lead trigger level and copper action level under paragraph (a)(ii)(D) of this section shall collect the standard number of samples on an annual basis. In no case may the system reduce the number of samples below the minimum of one sample per available tap. This monitoring shall begin in the calendar year following the monitoring conducted under paragraph (d)(1)(i) or (d)(1)(ii)(B) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f) during each of two consecutive six-month monitoring periods may reduce the frequency of monitoring to once per year and reduce the number of lead and copper samples in accordance with paragraph (c) of this section if it receives written approval from the State. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with §141.90, and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to this paragraph. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.	§141.86 (d)(4)(ii)	§141.86 (d)(4)(ii)(A)	(ii) (A) Any water system that meets the lead trigger level and copper action level and maintains the range of values for the water quality parameters for optimal corrosion control treatment specified by the State under § 141.82(f) during each of two consecutive six-month monitoring periods may reduce the sampling frequency for the standard number of samples to annual monitoring. This sampling shall begin in the calendar year immediately following the end of the second consecutive six-month monitoring period. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance to § 141.90 and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to this paragraph. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the frequency of tap sampling becomes available.	
		§141.86 (d)(4)(ii)(B)	(B) Any water system that exceeds the lead trigger level but meets the lead and copper action levels and maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) during each of two consecutive six-month monitoring periods may reduce the monitoring frequency at the standard number of sites to annual monitoring. This sampling shall begin in the calendar year immediately following the end of the second consecutive 6-month monitoring period. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance to § 141.90 and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to this paragraph. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the frequency of monitoring becomes available.	
A small or medium-size water system that meets the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years. Any water system that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f) during three consecutive years of monitoring may reduce the frequency of monitoring from annually to once every three years if it receives written approval from the State. Samples collected once every three years shall be collected no later than every third calendar year. The State shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with §141.90, and shall notify the system in writing when it determines the system is eligible to reduce the frequency of monitoring to once every three years. The State shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.	§141.86 (d)(4)(iii)	§141.86 (d)(4)(iii)(A)	(iii) (A) A small or medium-size water system that meets the lead trigger level and copper action level under paragraph (d)(4)(i)(D) of this section may reduce the number of samples in accordance with paragraph (c) of this section and reduce the monitoring frequency to triennial monitoring. This sampling should begin during the calendar year three years after the monitoring conducted under paragraph (d)(ii)(D) of this section. A small or medium system collecting fewer than five samples as specified in paragraph (c) of this section that meets the lead trigger level and copper action level under paragraph (d)(ii)(D) of this section may reduce the monitoring frequency to triennial monitoring. This monitoring should begin during the calendar year three years after the monitoring conducted under paragraph (d)(ii)(D) of this section. In no case may the system reduce the number of samples below the minimum of one sample per available tap. This sampling should begin during the calendar year three years after the monitoring conducted under paragraph (a)(ii)(D) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.86 (d)(4)(iii)(B)	(B) Any small or medium-size system monitoring under § 141.86(d)(4)(i)(A) or (B) that meets the lead trigger level and the copper action level in three consecutive rounds of annual monitoring may reduce the number of samples in accordance with paragraph (c) of this section and reduce the sampling frequency to triennial monitoring. This sampling should begin during the calendar year three years after the monitoring conducted under paragraph (a)(ii)(D) of this section. A small or medium system collecting fewer than five samples as specified in paragraph (c) of this section that meets the lead trigger level and copper action level under paragraph (a)(ii)(D) of this section may reduce the sampling frequency to triennial monitoring. In no case may the system reduce the number of samples below the minimum of one sample per available tap. This monitoring must begin during the calendar year three years after the monitoring conducted under paragraph (a)(ii)(D) of this section. (iv)	
A water system that reduces the number and frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in paragraph (a) of this section. Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August, or September unless the State has approved a different sampling period in accordance with paragraph (d)(4)(iv)(A) of this section.	§141.86 (d)(4)(iv)		(iv) A water system that reduces the frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in paragraph (a) of this section. Systems monitoring annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August, or September unless the State has approved a different monitoring period in accordance with paragraph (d)(iv)(A) of this section.	
The State, at its discretion, may approve a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period shall be no longer than four consecutive months and must represent a time of normal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the State shall designate a period that represents a time of normal operation for the system. This sampling shall begin during the period approved or designated by the State in the calendar year immediately following the end of the second consecutive six-month monitoring period for systems initiating annual monitoring and during the three-year period following the end of the third consecutive calendar year of annual monitoring for systems initiating triennial monitoring.	§141.86 (d)(4)(iv)(A)		(A) The State at its discretion may approve a different period for conducting the lead and copper tap sampling for systems collecting samples at a reduced frequency. Such a period shall be no longer than four consecutive months and must represent a time of normal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the State shall designate a period that represents normal operation for the system. This monitoring shall begin during the period approved or designated by the State in the calendar year immediately following the end of the second 6-month monitoring period for systems initiating annual monitoring and during the 3-year period following the end of the third consecutive year of annual monitoring for systems initiating triennial monitoring.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Systems monitoring annually, that have been collecting samples during the months of June through September and that receive State approval to alter their sample collection period under paragraph (d)(4)(iv)(A) of this section, must collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Systems monitoring triennially that have been collecting samples during the months of June through September, and receive State approval to alter the sampling collection period as per paragraph (d)(4)(iv)(A) of this section, must collect their next round of samples during a time period that ends no later than 45 months after the previous round of sampling. Subsequent rounds of sampling must be collected annually or triennially, as required by this section. Small systems with waivers, granted pursuant to paragraph (g) of this section, that have been collecting samples during the months of June through September and receive State approval to alter their sample collection period under paragraph (d)(4)(iv)(A) of this section must collect their next round of samples before the end of the 9-year period.	§141.86 (d)(4)(iv)(B)		(B) Systems monitoring annually that have been collecting samples during the months of June through September and that receive State approval to alter their monitoring period under paragraph (d)(4)(iv)(A) of this section must collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Systems monitoring triennially that have been collecting samples during the month of June through September and receive State approval to alter their sampling collection period as per paragraph (d)(4)(iv)(A) of this section must collect their next round of samples during a time period that ends no later than 45 months after the previous monitoring period. Subsequent monitoring must be conducted annually or triennially, as required by this section. Small systems with waivers, granted pursuant to paragraph (g) of this section that have been collecting samples during the months of June through September and receive State approval to alter their monitoring period as per paragraph (d)(4)(iv)(A) of this section must collect their next round of samples before the end of the 9-year period.	
Any water system that demonstrates for two consecutive 6-month monitoring periods that the tap water lead level computed under §141.80(c)(3) is less than or equal to 0.005 mg/L and the tap water copper level computed under §141.80(c)(3) is less than or equal to 0.65 mg/L may reduce the number of samples in accordance with paragraph (c) of this section and reduce the frequency of sampling to once every three calendar years.	§141.86 (d)(4)(v)			
A small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling in accordance with paragraph (d)(3) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section. Such a system shall also conduct water quality parameter monitoring in accordance with §141.87(b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in paragraph (c) of this section after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of paragraph (d)(4)(i) of this section and/or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section.	§141.86 (d)(4)(vi)(A)		(v) Any water system that demonstrates for two consecutive 6-month monitoring periods that its 90th percentile lead level, calculated under § 141.80(c)(4), is less than or equal to 0.005 mg/L and the 90th percentile copper level, calculated under § 141.80(c)(4), is less than or equal to 0.65 mg/L may reduce the number of samples in accordance with paragraph (c) of this section and reduce the frequency of monitoring to triennial monitoring.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.86 (d)(4)(vi)(A)(1)	(vi)(A)(1) A small or medium-size water system on reduced triennial monitoring that exceeds the lead or copper action level shall resume monitoring in accordance with paragraph (d)(3)(i) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section. Such a system shall also conduct water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such water system may resume annual monitoring for lead and copper and discontinue water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) after it has completed two consecutive 6-month rounds of monitoring that meet the criteria of (d)(4)(i)(A) of this section, and may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii)(B) or (d)(4)(v) of this section.	
		§141.86 (d)(4)(vi)(A)(2)	(2) A small or medium-size water system subject to annual monitoring that exceeds the lead or copper action level shall resume sampling in accordance with paragraph (d)(3)(i) of this section. Such a system shall also conduct water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such system may resume annual monitoring for lead and copper and discontinue water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) after it has completed two subsequent consecutive 6-month rounds of monitoring that meet the criteria of (d)(4)(i)(A) of this section, and may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii)(B) or (d)(4)(v) of this section.	
		§141.86 (d)(4)(vi)(A)(3)	(3) A small or medium-size system subject to reduced triennial monitoring that exceeds the lead trigger level shall resume sampling in accordance with (d)(4)(ii)(B) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section. If required by the State, such a system shall also conduct water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such system may resume triennial monitoring for lead and copper and discontinue water quality parameter monitoring in accordance with § 141.87 (b), (c) or (d) (as appropriate) after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any water system subject to the reduced monitoring frequency that fails to meet the lead action level during any four-month monitoring period or that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State under §141.82(f) for more than nine days in any six-month period specified in §141.87(d) shall conduct tap water sampling for lead and copper at the frequency specified in paragraph (d)(3) of this section, collect the number of samples specified for standard monitoring under paragraph (c) of this section, and shall resume monitoring for water quality parameters within the distribution system in accordance with §141.87(d). This standard tap water sampling shall begin no later than the six-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:	§141.86 (d)(4)(vi)(B)	§141.86 (d)(4)(vi)(B)(1)	(B)(*1*) Any water system subject to the reduced triennial monitoring frequency that fails to meet the lead or copper action level during any four-month monitoring period or fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State under § 141.82(f) for more than nine days in any 6-month monitoring period specified in § 141.87(d) shall conduct tap water monitoring for lead and copper at the frequency specified in paragraph (d)(3)(i) of this section, collect the number of samples specified for standard monitoring under paragraph (c) of this section, and shall resume sampling for water quality parameters in accordance with § 141.87(d). This standard tap water monitoring shall begin no later than the 6-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:	
(*1*) The system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in paragraph (c) of this section after it has completed two subsequent six-month rounds of monitoring that meet the criteria of paragraph (d)(4)(ii) of this section and the system has received written approval from the State that it is appropriate to resume reduced monitoring on an annual frequency. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.	§141.86 (d)(4)(vi)(B)	§141.86 (d)(4)(vi)(B)(1)(i)	(*i*) The system may resume annual monitoring for lead and copper after it has completed two subsequent 6-month rounds of monitoring that meet the criteria of paragraph (d)(4)(ii)(A) of this section and the system has received written approval from the State that it is appropriate to resume reduced monitoring on an annual frequency. This monitoring shall begin during the calendar year immediately following the end of the second consecutive 6-month monitoring period.	
(*2*) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section and the system has received written approval from the State that it is appropriate to resume triennial monitoring.	§141.86 (d)(4)(vi)(B)	§141.86 (d)(4)(vi)(B)(1) (ii)	(*ii*) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section and the system has received written approval from the State that it is appropriate to resume triennial monitoring.	
(*3*) The system may reduce the number of water quality parameter tap water samples required in accordance with §141.87(e)(1) and the frequency with which it collects such samples in accordance with §141.87(e)(2). Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of §141.87(e)(2), that it has re-qualified for triennial monitoring.	§141.86 (d)(4)(vi)(B)	§141.86 (d)(4)(vi)(B)(1)(iii)	(*iii*) The system may reduce the number of water quality parameter tap water samples required in accordance with § 141.87(e)(1) and the frequency with which it collects such samples in accordance with § 141.87(e)(2). Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of § 141.87(e)(2), that it has re-qualified for triennial monitoring.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.86 (d)(4)(vi)(B)(2)	(*2*) Any water system subject to the reduced annual monitoring frequency that fails to meet the lead or copper action level during any four-month monitoring period or fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State under § 141.82(f) for more than nine days in any 6-month monitoring period specified in § 141.87(d) shall conduct tap water monitoring for lead and copper at the frequency specified in paragraph (d)(3)(i) of this section, and shall resume sampling for water quality parameters in accordance with § 141.87(d). This standard monitoring shall begin no later than the 6-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:	
		§141.86 (d)(4)(vi)(B)(2)(i)	(*i*) The system may resume annual monitoring for lead and copper after it has completed two subsequent 6-month rounds of monitoring that meet the criteria of paragraph (d)(4)(ii)(A) of this section and the system has received written approval from the State that it is appropriate to resume reduced monitoring on an annual frequency. This sampling shall begin during the calendar year immediately following the end of the second consecutive 6-month monitoring period.	
		§141.86 (d)(4)(vi)(B)(2) (ii)	(*ii*) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section and the system has received written approval from the State that it is appropriate to resume triennial monitoring.	
		§141.86 (d)(4)(vi)(B)(2)(iii)	(*iii*) The system may reduce the number of water quality parameter tap water samples required in accordance with § 141.87(e)(1) and the frequency with which it collects such samples in accordance with § 141.87(e)(2). Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of § 141.87(e)(2), that it has qualified for triennial monitoring.	
		§141.86 (d)(4)(vi)(B)(3)	(*3*) Any water system subject to the reduced triennial monitoring frequency that exceeds the lead trigger level during any four-month monitoring period shall conduct tap water sampling for lead and copper at the frequency specified in paragraph (d)(4)(ii)(B) of this section, collect the number of samples specified for standard monitoring under paragraph (c) of this section, and shall resume sampling for water quality parameters in accordance with § 141.87(d). This standard tap water monitoring shall begin no later than the 6-month period beginning January 1 of the calendar year following the lead trigger level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.86 (d)(4)(vi)(B)(3)(i)	*(i)* The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (d)(4)(iii) or (d)(4)(v) of this section and the system has received written approval from the State that it is appropriate to resume triennial monitoring.	
		§141.86 (d)(4)(vi)(B)(3) (ii)	(*ii)* The system may reduce the number of water quality parameter tap water samples required in accordance with § 141.87(e)(1) and the frequency with which it collects such samples in accordance with § 141.87(e)(2). Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of § 141.87(e)(2), that it has re-qualified for triennial monitoring.	
		§141.86 (d)(4)(vi)(B)(3)(iii)	(*iii*) Any water system subject to a reduced monitoring frequency under paragraph (d)(4) of this section shall notify the State in writing in accordance with § 141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The State may require the system to resume sampling in accordance with paragraph (d)(3) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section or take other appropriate steps such as increased water quality parameter monitoring, or re-evaluation of corrosion control treatment given the potentially different water quality considerations.	
Any water system subject to a reduced monitoring frequency under paragraph (d)(4) of this section shall notify the State in writing in accordance with §141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The State may require the system to resume sampling in accordance with paragraph (d)(3) of this section and collect the number of samples specified for standard monitoring under paragraph (c) of this section or take other appropriate steps such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.	§141.86 (d)(4)(vii)			
Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the State in making any determinations (*i.e.*, calculating the 90th percentile lead or copper level) under this subpart.	§141.86(e)		(e) *Additional monitoring by systems*. The results of any monitoring conducted in addition to the minimum requirements of this section (such as customer-requested sampling) shall be considered by the system and the State in making any determinations (*i.e*., calculating the 90th percentile lead or copper level) under this subpart. Lead service line water systems that are unable to collect the minimum number of samples from Tier 1 or Tier 2 sites shall calculate the 90th percentile using data from all the lead service lines sites and the highest values from lower tier sites to meet the specified minimum number of sites. Data from additional lower tier sites shall be submitted to the State but shall not be used in the 90th percentile calculation. Customer-requested samples from known lead service line sites shall be included in the 90th percentile calculation when they meet the requirements of paragraph (b) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Invalidation of lead or copper tap water samples. A sample invalidated under this paragraph does not count toward determining lead or copper 90th percentile levels under §141.80(c)(3) or toward meeting the minimum monitoring requirements of paragraph (c) of this section.	§141.86(f)		(f) *Invalidation of lead and copper tap samples collected under § 141.86(d).*	
The State may invalidate a lead or copper tap water sample at least if one of the following conditions is met. (i) The laboratory establishes that improper sample analysis caused erroneous results. (ii) The State determines that the sample was taken from a site that did not meet the site selection criteria of this section. (iii) The sample container was damaged in transit. (iv) There is substantial reason to believe that the sample was subject to tampering.	§141.86 (f)(1)			
The system must report the results of all samples to the State and all supporting documentation for samples the system believes should be invalidated.	§141.86 (f)(2)			
To invalidate a sample under paragraph (f)(1) of this section, the decision and the rationale for the decision must be documented in writing. States may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.	§141.86 (f)(3)			
The water system must collect replacement samples for any samples invalidated under this section if, after the invalidation of one or more samples, the system has too few samples to meet the minimum requirements of paragraph (c) of this section. Any such replacement samples must be taken as soon as possible, but no later than 20 days after the date the State invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.	§141.86 (f)(4)			
Monitoring waivers for small systems. Any small system that meets the criteria of this paragraph may apply to the State to reduce the frequency of monitoring for lead and copper under this section to once every nine years (*i.e.,* a “full waiver”) if it meets all of the materials criteria specified in paragraph (g)(1) of this section and all of the monitoring criteria specified in paragraph (g)(2) of this section. If State regulations permit, any small system that meets the criteria in paragraphs (g)(1) and (2) of this section only for lead, or only for copper, may apply to the State for a waiver to reduce the frequency of tap water monitoring to once every nine years for that contaminant only (*i.e.,* a “partial waiver”).	§141.86(g)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Materials criteria. The system must demonstrate that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials, as those terms are defined in this paragraph, as follows: (i) *Lead.* To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead (*i.e.,* a "lead waiver"), the water system must provide certification and supporting documentation to the State that the system is free of all lead-containing materials, as follows: (A) It contains no plastic pipes which contain lead plasticizers, or plastic service lines which contain lead plasticizers; and (B) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA section 1417(e)). (ii) *Copper.* To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper (*i.e.,* a "copper waiver"), the water system must provide certification and supporting documentation to the State that the system contains no copper pipes or copper service lines.	§141.86 (g)(1)			
Monitoring criteria for waiver issuance. The system must have completed at least one 6-month round of standard tap water monitoring for lead and copper at sites approved by the State and from the number of sites required by paragraph (c) of this section and demonstrate that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, meet the following criteria. (i) *Lead levels.* To qualify for a full waiver, or a lead waiver, the system must demonstrate that the 90th percentile lead level does not exceed 0.005 mg/L. (ii) *Copper levels.* To qualify for a full waiver, or a copper waiver, the system must demonstrate that the 90th percentile copper level does not exceed 0.65 mg/L.	§141.86 (g)(2)			
State approval of waiver application. The State shall notify the system of its waiver determination, in writing, setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the State may require the system to perform specific activities (e.g., limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver) to avoid the risk of lead or copper concentration of concern in tap water. The small system must continue monitoring for lead and copper at the tap as required by paragraphs (d)(1) through (d)(4) of this section, as appropriate, until it receives written notification from the State that the waiver has been approved.	§141.86 (g)(3)			
Monitoring frequency for systems with waivers.	§141.86 (g)(4)			
A system with a full waiver must conduct tap water monitoring for lead and copper in accordance with paragraph (d)(4)(iv) of this section at the reduced number of sampling sites identified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(1) of this section for both lead and copper to the State along with the monitoring results. Samples collected every nine years shall be collected no later than every ninth calendar year.	§141.86 (g)(4)(i)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
A system with a partial waiver must conduct tap water monitoring for the waived contaminant in accordance with paragraph (d)(4)(iv) of this section at the reduced number of sampling sites specified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(1) of this section pertaining to the waived contaminant along with the monitoring results. Such a system also must continue to monitor for the non-waived contaminant in accordance with requirements of paragraph (d)(1) through (d)(4) of this section, as appropriate.	§141.86 (g)(4)(ii)			
Any water system with a full or partial waiver shall notify the State in writing in accordance with §141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source, as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The State has the authority to require the system to add or modify waiver conditions (e.g., require recertification that the system is free of lead-containing and/or copper-containing materials, require additional round(s) of monitoring), if it deems such modifications are necessary to address treatment or source water changes at the system.	§141.86 (g)(4)(iii)			
If a system with a full or partial waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, (e.g., as a result of new construction or repairs), the system shall notify the State in writing no later than 60 days after becoming aware of such a change.	§141.86 (g)(4)(iv)			
Continued eligibility. If the system continues to satisfy the requirements of paragraph (g)(4) of this section, the waiver will be renewed automatically, unless any of the conditions listed in paragraph (g)(5)(i) through (g)(5)(iii) of this section occurs. A system whose waiver has been revoked may re-apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of paragraphs (g)(1) and (g)(2) of this section.	§141.86 (g)(5)			
A system with a full waiver or a lead waiver no longer satisfies the materials criteria of paragraph (g)(1)(i) of this section or has a 90th percentile lead level greater than 0.005 mg/L.	§141.86 (g)(5)(i)			
A system with a full waiver or a copper waiver no longer satisfies the materials criteria of paragraph (g)(1)(ii) of this section or has a 90th percentile copper level greater than 0.65 mg/L.	§141.86 (g)(5)(ii)			
The State notifies the system, in writing, that the waiver has been revoked, setting forth the basis of its decision.	§141.86 (g)(5)(iii)			
Requirements following waiver revocation. A system whose full or partial waiver has been revoked by the State is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows: (i) If the system exceeds the lead and/or copper action level, the system must implement corrosion control treatment in accordance with the deadlines specified in §141.81(e), and any other applicable requirements of this subpart. (ii) If the system meets both the lead and the copper action level, the system must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sample sites specified in paragraph (c) of this section.	§141.86 (g)(6)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Pre-existing waivers. Small system waivers approved by the State in writing prior to April 11, 2000 shall remain in effect under the following conditions: (i) If the system has demonstrated that it is both free of lead-containing and copper-containing materials, as required by paragraph (g)(1) of this section and that its 90th percentile lead levels and 90th percentile copper levels meet the criteria of paragraph (g)(2) of this section, the waiver remains in effect so long as the system continues to meet the waiver eligibility criteria of paragraph (g)(5) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(4) of this section shall be completed no later than nine years after the last time the system has monitored for lead and copper at the tap. (ii) If the system has met the materials criteria of paragraph (g)(1) of this section but has not met the monitoring criteria of paragraph (g)(2) of this section, the system shall conduct a round of monitoring for lead and copper at the tap demonstrating that it meets the criteria of paragraph (g)(2) of this section no later than September 30, 2000. Thereafter, the waiver shall remain in effect as long as the system meets the continued eligibility criteria of paragraph (g)(5) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(4) of this section shall be completed no later than nine years after the round of monitoring conducted pursuant to paragraph (g)(2) of this section.	§141.86 (g)(7)			
		§141.86(h)	(h) *Follow-up samples for "find-and-fix" under § 141.82(j).* Systems shall collect a follow-up sample at any site that exceeds the action level within 30 days of receiving the sample results. These follow-up samples may use different sample volumes or different sample collection procedures to assess the source of elevated lead. Samples collected under this section shall be submitted to the State but shall not be included in the 90th percentile calculation.	
		§141.86(i)	(i*) Public availability of tap monitoring results used in the 90th percentile calculation*. All water systems shall make available to the public the results of the tap water monitoring used to make the 90th percentile calculation under § 141.80(c)(4). Water systems shall not be required to list the addresses of the sites where the tap samples were collected. Large systems shall make available the monitoring results in a digital format. Small and medium-size systems shall make available the monitoring results in either a written or digital format.	
§141.87 Monitoring requirements for water quality parameters.				
All large water systems, and all small- and medium-size systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with this section. The requirements of this section are summarized in the table at the end of this section.	§141.87		All large water systems, and all small- and medium-size water systems that exceed the lead or copper action level, and all small- and medium-size water systems with corrosion control treatment that exceed the lead trigger level shall monitor water quality parameters in addition to lead and copper in accordance with this section. The requirements of this section are summarized in the table at the end of this section.	
General requirements	§141.87(a)			
Sample collection methods.	§141.87 (a)(1)			

<table>
<tr><th>Federal Requirement</th><th>Federal Citation</th><th>Revised Citation</th><th>New/Revised Regulation</th><th>Difference between STR and LTR Regulation</th></tr>
<tr><td>Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under §141.86(a). [Note: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for coliform sampling under 40 CFR 141.21.]</td><td>§141.87 (a)(1)(i)</td><td></td><td>(i) Tap samples shall be representative of water quality throughout the distribution system, taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under § 141.86(a). [Note: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for coliform sampling under § 141.21 in this chapter.]</td><td></td></tr>
<tr><td>Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).</td><td>§141.87 (a)(1)(ii)</td><td></td><td>(ii) Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).</td><td></td></tr>
<tr><td>Number of samples.</td><td>§141.87 (a)(2)</td><td></td><td></td><td></td></tr>
<tr><td>Systems shall collect two tap samples for applicable water quality parameters during each monitoring period specified under paragraphs (b) through (e) of this section from the following number of sites.</td><td>§141.87 (a)(2)(i)</td><td></td><td>(i) Systems shall collect two tap samples for applicable water quality parameters during each monitoring period specified under paragraphs (b) through (e) of this section from the following minimum number of sites. Systems that add sites as a result of the “find-and-fix” requirements in § 141.82(j) shall collect tap samples for applicable water quality parameters during each monitoring period under paragraphs (c) through (e) of this section and shall sample from that adjusted minimum number of sites.</td><td></td></tr>
<tr><td colspan="2"><table><tr><th>System size (No. people served)</th><th>No. of sites for water quality parameters</th></tr><tr><td>>100,000</td><td>25</td></tr><tr><td>10,001-100,000</td><td>10</td></tr><tr><td>3,301 to 10,000</td><td>3</td></tr><tr><td>501 to 3,300</td><td>2</td></tr><tr><td>101 to 500</td><td>1</td></tr><tr><td>≤100</td><td>1</td></tr></table></td><td colspan="2"><table><tr><th>System size (No. people served)</th><th>Minimum No. of sites for water quality parameters</th></tr><tr><td>100,000</td><td>25</td></tr><tr><td>10,001 – 100,000</td><td>10</td></tr><tr><td>3,301 – 10,000</td><td>3</td></tr><tr><td>501 – 3,300</td><td>2</td></tr><tr><td>101 - 500</td><td>1</td></tr><tr><td>≤ 100</td><td>1</td></tr></table></td><td></td></tr>
<tr><td>Except as provided in paragraph (c)(3) of this section, systems shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in paragraph (b) of this section. During each monitoring period specified in paragraphs (c)-(e) of this section, systems shall collect one sample for each applicable water quality parameter at each entry point to the distribution system.</td><td>§141.87 (a)(2)(ii)</td><td>§141.87 (a)(2)(ii)(A)</td><td>(ii) (A) Except as provided in paragraph (c)(2) of this section, water systems without corrosion control treatment shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in paragraph (b) of this section. During each monitoring period specified in paragraphs (c) through (e) of this section, water systems shall collect one sample for each applicable water quality parameter at each entry point to the distribution system.</td><td></td></tr>
<tr><td></td><td></td><td>§141.87 (a)(2)(ii)(B)</td><td>(B) During each monitoring period specified in paragraphs (b) through (e) of the section, water systems with corrosion control treatment shall continue to collect one sample for each applicable water quality parameter at each entry point to the distribution system no less frequently than once every two weeks.</td><td></td></tr>
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Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Initial sampling All large water systems shall measure the applicable water quality parameters as specified below at taps and at each entry point to the distribution system during each six-month monitoring period specified in §141.86(d)(1). All small and medium-size systems shall measure the applicable water quality parameters at the locations specified below during each six-month monitoring period specified in §141.86(d)(1) during which the system exceeds the lead or copper action level. (1) At taps: (i) pH; (ii) Alkalinity; (iii) Orthophosphate, when an inhibitor containing a phosphate compound is used; (iv) Silica, when an inhibitor containing a silicate compound is used; (v) Calcium; (vi) Conductivity; and (vii) Water temperature. (2) At each entry point to the distribution system: all of the applicable parameters listed in paragraph (b)(1) of this section.	§141.87(b)	§141.87(b)(1)	(b) *Initial sampling for water systems without corrosion control treatment* (1) Water systems without corrosion control treatment shall measure the applicable water quality parameters at the locations specified below during each 6-month monitoring period specified in § 141.86(d)(1), during which the water system exceeds the lead or copper action level, and continue until the water system meets the lead and copper action levels for two consecutive 6-month monitoring periods. (i) At taps: (A) pH; (B) Alkalinity; (C) Orthophosphate, when an inhibitor containing a orthophosphate compound is used; (D) Silica, when an inhibitor containing a silicate compound is used; (ii) At each entry point to the distribution system all of the applicable parameters listed in paragraph (b)(1) of this section.	
		§141.87(b)(2)	(2) All large water systems shall measure the applicable water quality parameters as specified in paragraph (b)(1) of this section, at taps and at each entry point to the distribution system during each 6-month monitoring period specified in § 141.86(d)(1). All small and medium-size systems with corrosion control shall measure the applicable water quality parameters at the locations specified below during each 6-month monitoring period specified in § 141.86(d)(1) during which the system exceeds the lead trigger level or copper action level. (i) At taps: (A) pH; (B) Alkalinity; (C) Orthophosphate, when an inhibitor containing an orthophosphate compound is used; (D) Silica, when an inhibitor containing a silicate compound is used; (ii) At each entry point to the distribution system, all of the applicable parameters listed in paragraph (b)(2) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Monitoring after installation of corrosion control. Any large system which installs optimal corrosion control treatment pursuant to §141.81(d)(4) shall measure the water quality parameters at the locations and frequencies specified below during each six-month monitoring period specified in §141.86(d)(2)(i). Any small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in §141.86(d)(2)(ii) in which the system exceeds the lead or copper action level. (1) At taps, two samples for: (i) pH; (ii) Alkalinity; (iii) Orthophosphate, when an inhibitor containing a phosphate compound is used; (iv) Silica, when an inhibitor containing a silicate compound is used; (v) Calcium, when calcium carbonate stabilization is used as part of corrosion control.	§141.87 (c)(1)	§141.87(c)(1)	*(c) Monitoring after installation of optimal corrosion control or re-optimized corrosion control treatment.* (1) Any large water system that re-optimizes corrosion control treatment pursuant to § 141.81(d)(5)(i) and any small or medium-size water system that exceeds the lead or copper action level and re-optimizes corrosion control treatment pursuant to § 141.81(d)(5)(ii) shall measure the water quality parameters at the locations and frequencies specified in paragraph (c)(1)(i) of this section, during each 6-month monitoring period specified in § 141.86(d)(2)(i). Any small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each 6-month monitoring period specified in § 141.86(d)(2)(i). (i) At taps, two samples for: (A) pH; (B) Alkalinity; (C) Orthophosphate, when an inhibitor containing an orthophosphate compound is used; (D) Silica, when an inhibitor containing a silicate compound is used; (ii) Except as provided in paragraph (c)(3) of this section, at each entry point to the distribution system, at least one sample no less frequently than every two weeks (biweekly) for: (A) pH; (B) When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and (C) When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable). (ii) Any groundwater system can limit entry point sampling described in paragraph (c)(2) of this section to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated groundwater sources mixes with water from treated groundwater sources, the system must monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under this paragraph, the water system shall provide to the State, written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(2) Except as provided in paragraph (c)(3) of this section, at each entry point to the distribution system, at least one sample no less frequently than every two weeks (biweekly) for: (i) pH; (ii) When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and (iii) When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).	§141.87 (c)(2)		(2) States have the discretion to require small and medium-size systems that exceed the lead trigger level but not the lead and copper action levels to conduct water quality parameter monitoring as described in paragraph (c)(ii) of this section or the State can develop its own water quality control parameter monitoring structure for these systems.	
(3) Any ground water system can limit entry point sampling described in paragraph (c)(2) of this section to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the system must monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under this paragraph, the system shall provide to the State written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.	§141.87 (c)(3)			
Monitoring after State specifies water quality parameter values for optimal corrosion control. After the State specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under §141.82(f), all large systems shall measure the applicable water quality parameters in accordance with paragraph (c) of this section and determine compliance with the requirements of §141.82(g) every six months with the first six-month period to begin on either January 1 or July 1, whichever comes first, after the State specifies the optimal values under §141.82(f). Any small or medium-size system shall conduct such monitoring during each six-month period specified in this paragraph in which the system exceeds the lead or copper action level. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to §141.86(d)(4) at the time of the action level exceedance, the start of the applicable six-month monitoring period under this paragraph shall coincide with the start of the applicable monitoring period under §141.86(d)(4). Compliance with State-designated optimal water quality parameter values shall be determined as specified under §141.82(g).	§141.87(d)	§141.87(d)(1)	(d) *Monitoring after State specifies water quality parameter values for optimal corrosion control.* (1) After the State specifies the values for applicable water quality parameters reflecting optimal corrosion control treatment under § 141.87(f), all large systems shall measure the applicable water quality parameters in accordance with paragraph (c) of this section and determine compliance with the requirements of § 141.82(g) every six months with the first 6-month period to begin on either January 1 or July 1, whichever comes first, after the State specifies the optimal values under § 141.82(f). Any small or medium-size water system that exceeded an action level shall conduct such monitoring until the water system meets the lead and copper action levels and the optimal water quality control parameters in two consecutive 6-month monitoring periods under § 141.86(d)(3)(i) and this paragraph. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to § 141.86(d)(4) at the time of the action level exceedance, the start of the applicable 6-month monitoring period under this paragraph shall coincide with the start of the applicable monitoring period under § 141.86(d)(4). Compliance with State-designated optimal water quality parameter values shall be determined as specified under § 141.82(g).	
		§141.87(d)(2)	(2) Any small or medium-size system that exceeds the lead trigger level, but not the lead and copper action levels for which the State has set optimal water quality control parameters shall monitor according to the structure in paragraph (c)(ii of this section, until the system no longer exceeds the lead trigger level in three consecutive annual monitoring periods. States have the discretion to continue to require these systems to monitor optimal water quality control parameters.	
Reduced monitoring.	§141.87(e)			

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<tr><td>Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six-month monitoring periods under paragraph (d) of this section shall continue monitoring at the entry point(s) to the distribution system as specified in paragraph (c)(2) of this section. Such system may collect two tap samples for applicable water quality parameters from the following reduced number of sites during each six-month monitoring period.</td><td>§141.87 (e)(1)</td><td></td><td>(1) Any large water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) and does not exceed the lead trigger level during each of two consecutive 6-month monitoring periods under paragraph (d) of this section shall continue monitoring at the entry point(s) to the distribution system as specified in paragraph (c)(ii) of this section. Such system may collect two tap samples for applicable water quality parameters from the following reduced number of sites during each 6-month monitoring period.</td><td></td></tr>
<tr><td><table><tr><th>System size (No. of people served)</th><th>Reduced No. of sites for water quality parameters</th></tr><tr><td>>100,000</td><td>10</td></tr><tr><td>10,001 to 100,000</td><td>7</td></tr><tr><td>3,301 to 10,000</td><td>3</td></tr><tr><td>501 to 3,300</td><td>2</td></tr><tr><td>101 to 500</td><td>1</td></tr><tr><td>≤100</td><td>1</td></tr></table></td><td></td><td><table><tr><td>System Size (Number of People Served)</td><td>Reduced Minimum Number of Site

Water Quality Parameters</td></tr><tr><td>100,000</td><td>10</td></tr><tr><td>10,001 – 100,000</td><td>7</td></tr><tr><td>3,301 – 10,000</td><td>3</td></tr><tr><td>501 – 3,300</td><td>2</td></tr><tr><td>101 - 500</td><td>1</td></tr><tr><td>≤ 100</td><td>1</td></tr></table></td><td></td></tr>
<tr><td>Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this paragraph (e)(1) of this section from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f), during three consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (e)(1) of this section from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.</td><td>§141.87 (e)(2)(i)</td><td></td><td>(2)(i) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) and does not exceed the lead trigger level during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this paragraph (e)(1) of this section, from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of 6-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f) and meets the lead trigger level during three consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (e)(1) of this section from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.</td><td></td></tr>
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Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
A water system may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in paragraph (e)(1) of this section to every three years if it demonstrates during two consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the PQL for lead specified in §141.89 (a)(1)(ii), that its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L for copper in §141.80(c)(2), and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f). Monitoring conducted every three years shall be done no later than every third calendar year.	§141.87 (e)(2)(ii)		(ii) A water system may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in paragraph (e)(1) of this section to every three years if it demonstrates during two consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the PQL for lead specified in § 141.89 (a)(1)(ii), that its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L in § 141.80(c)(3), and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under § 141.82(f). Monitoring conducted every three years shall be done no later than every third calendar year.	
A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.	§141.87 (e)(3)		(3) A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.	
Any water system subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State in §141.82(f) for more than nine days in any six-month period specified in §141.82(g) shall resume distribution system tap water sampling in accordance with the number and frequency requirements in paragraph (d) of this section. Such a system may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in paragraph (e)(1) of this section after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of that paragraph and/or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (e)(2)(i) or (e)(2)(ii) of this section.	§141.87 (e)(4)		(4) Any water system subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State in § 141.82(f) for more than nine days in any 6-month period specified in § 141.82(g) shall resume distribution system tap water sampling in accordance with the number and frequency requirements in paragraph (d) of this section. Such a system may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in paragraph (e)(1) of this section after it has completed two subsequent consecutive 6-month rounds of monitoring that meet the criteria of that paragraph and/or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (e)(2)(i) or (e)(2)(ii) of this section.	
Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the State in making any determinations (*i.e.*, determining concentrations of water quality parameters) under this section or §141.82.	§141.87(f)		(f) *Additional monitoring by systems.* The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the water system and the State in making any determinations (*i.e.*, determining concentrations of water quality parameters) under this section or § 141.82.	
		§141.87(g)	(g) *Additional sites added from Find-and-Fix.* Any water system that adds water quality parameter sites through the "find-and-fix" provisions pursuant to § 141.82(j) shall add those sites to the minimum number of sites specified under paragraphs (a) through (e) of this section.	
§141.88 Monitoring requirements for lead and copper in source water.				
Sample location, collection methods, and number of samples.	§141.88(a)			
A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with §141.86 shall collect lead and copper source water samples in accordance with the following requirements regarding sample location, number of samples, and collection methods:	§141.88 (a)(1)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (hereafter called a sampling point). The system shall take one sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.	§141.88 (a)(1)(i)		(i) Groundwater systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (hereafter called a sampling point). The system shall take one sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.	
Surface water systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (hereafter called a sampling point). The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant. NOTE TO PARAGRAPH (a)(1)(ii): For the purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.	§141.88 (a)(1)(ii)			
If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.,* when water is representative of all sources being used).	§141.88 (a)(1)(iii)			
The State may reduce the total number of samples which must be analyzed by allowing the use of compositing. Compositing of samples must be done by certified laboratory personnel. Composite samples from a maximum of five samples are allowed, provided that if the lead concentration in the composite sample is greater than or equal to 0.001 mg/L or the copper concentration is greater than or equal to 0.160 mg/L, then either: (A) A follow-up sample shall be taken and analyzed within 14 days at each sampling point included in the composite; or (B) If duplicates of or sufficient quantities from the original samples from each sampling point used in the composite are available, the system may use these instead of resampling.	§141.88 (a)(1)(iv)			
Where the results of sampling indicate an exceedance of maximum permissible source water levels established under §141.83(b)(4), the State may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point. If a State-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the State-specified maximum permissible levels. Any sample value below the detection limit shall be considered to be zero. Any value above the detection limit but below the PQL shall either be considered as the measured value or be considered one-half the PQL.	§141.88 (a)(2)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Monitoring frequency after system exceeds tap water action level. Any system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system no later than six months after the end of the monitoring period during which the lead or copper action level was exceeded. For monitoring periods that are annual or less frequent, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or if the State has established an alternate monitoring period, the last day of that period.	§141.88(b)		(b) *Monitoring frequency after system exceeds tap water action level*. Any system which exceeds the lead or copper action level at the tap for the first time or for the first time after a change in source or source water treatment required under § 141.83 (b)(2) shall collect one source water sample from each entry point to the distribution system no later than six months after the end of the monitoring period during which the lead or copper action level was exceeded. For monitoring periods that are annual or less frequent, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or if the State has established an alternate monitoring period, the last day of that period. If the State determines that source water treatment is not required under § 141.83(b)(2), the system is not required to conduct additional source water monitoring unless directed by the State. A system subject to discontinued source water monitoring under this paragraph, shall notify the State in writing pursuant to § 141.90(a)(3) of the addition of a new source.	
		§141.88(b)(1)	(1) The State may waive additional source water monitoring under the following conditions: (i) The water system has already conducted source water monitoring following a previous action level exceedance; (ii) The State has determined that source water treatment is not required; and (iii) The system has not added any new water sources.	
Monitoring frequency after installation of source water treatment. Any system which installs source water treatment pursuant to §141.83(a)(3) shall collect an additional source water sample from each entry point to the distribution system during two consecutive six-month monitoring periods by the deadline specified in §141.83(a)(4).	§141.88(c)			
Monitoring frequency after State specifies maximum permissible source water levels or determines that source water treatment is not needed.	§141.88(d)			
A system shall monitor at the frequency specified below in cases where the State specifies maximum permissible source water levels under §141.83(b)(4) or determines that the system is not required to install source water treatment under §141.83(b)(2).	§141.88 (d)(1)		(1) A system shall monitor at the frequency specified in paragraphs (d)(1) and (2) of this section, in cases where the State specifies maximum permissible source water levels under § 141.83(b)(4).	
A water system using only groundwater shall collect samples once during the three-year compliance period (as that term is defined in §141.2) in effect when the applicable State determination under paragraph (d)(1) of this section is made. Such systems shall collect samples once during each subsequent compliance period. Triennial samples shall be collected every third calendar year.	§141.88 (d)(1)(i)			
A water system using surface water (or a combination of surface and ground water) shall collect samples once during each calendar year, the first annual monitoring period to begin during the year in which the applicable State determination is made under paragraph (d)(1) of this section.	§141.88 (d)(1)(ii)			
A system is not required to conduct source water sampling for lead and/or copper if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under paragraph (d)(1) (i) or (ii) of this section.	§141.88 (d)(2)			
Reduced monitoring frequency.	§141.88(e)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
A water system using only ground water may reduce the monitoring frequency for lead and copper in source water to once during each nine-year compliance cycle (as that term is defined in §141.2) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria: (i) The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the State in §141.83(b)(4) during at least three consecutive compliance periods under paragraph (d)(1) of this section; or (ii) The State has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive compliance periods in which sampling was conducted under paragraph (d)(1) of this section, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.	§141.88 (e)(1)		(1) A water system using only groundwater may reduce the monitoring frequency for lead and copper in source water to once during each nine-year compliance cycle (as that term is defined in § 141.2) provided that the samples are collected no later than every ninth calendar year and if the system meets the following criteria: (i) The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the State in 141.83(b)(4) during at least three consecutive compliance periods under section (d)(1) of this section. (ii) [REMOVED]	
A water system using surface water (or a combination of surface water and ground water) may reduce the monitoring frequency in paragraph (d)(1) of this section to once during each nine-year compliance cycle (as that term is defined in §141.2) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria: (i) The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the State in §141.83(b)(4) for at least three consecutive years; or (ii) The State has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive years, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.	§141.88 (e)(2)		(2) A water system using surface water (or a combination of surface water and groundwater) may reduce the monitoring frequency in paragraph (d)(1) of this section to once during each 9-year compliance cycle (as that term is defined in § 141.2 of this chapter) provided that the samples are collected no later than every ninth calendar year and if the system meets the following criteria: (i) *** (unchanged) (ii) [REMOVED]	
A water system that uses a new source of water is not eligible for reduced monitoring for lead and/or copper until concentrations in samples collected from the new source during three consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the State in §141.83(a)(5).	§141.88 (e)(3)			
§141.89 Analytical methods.				
Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted with the methods in §141.23(k)(1).	§141.89(a)		(a) Analyses for lead, copper, pH, alkalinity, orthophosphate, and silica shall be conducted in accordance with methods in 141.23(k)(1).	
Analyses for alkalinity, calcium, conductivity, orthophosphate, pH, silica, and temperature may be performed by any person acceptable to the State. Analyses under this section for lead and copper shall only be conducted by laboratories that have been certified by EPA or the State. To obtain certification to conduct analyses for lead and copper, laboratories must:	§141.89 (a)(1)		(1) Analyses for alkalinity, orthophosphate, pH, and silica may be performed by any person acceptable to the State. Analyses under this section for lead and copper shall only be conducted by laboratories that have been certified by EPA or the State. To obtain certification to conduct analyses for lead and copper, laboratories must:	
Analyze Performance Evaluation samples, which include lead and copper, provided by or acceptable to EPA or the State at least once a year by each method for which the laboratory desires certification; and	§141.89 (a)(1)(i)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Achieve quantitative acceptance limits as follows: (A) For lead: ±30 percent of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.005 mg/L. The Practical Quantitation Level, or PQL for lead is 0.005 mg/L. (B) For Copper: ±10 percent of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.050 mg/L. The Practical Quantitation Level, or PQL for copper is 0.050 mg/L.	§141.89 (a)(1)(ii)			
Achieve the method detection limit for lead of 0.001 mg/L according to the procedures in appendix B of part 136 of this title. This need only be accomplished if the laboratory will be processing source water composite samples under §141.88(a)(1)(iv).	§141.89 (a)(1)(iii)		(iii) Achieve method detection limit for lead of 0.001 mg/L according to the procedures in Appendix B of part 136 of this title.	
Be currently certified by EPA or the State to perform analyses to the specifications described in paragraph (a)(1) of this section.	§141.89 (a)(1)(iv)			
States have the authority to allow the use of previously collected monitoring data for purposes of monitoring, if the data were collected and analyzed in accordance with the requirements of this subpart.	§141.89 (a)(2)			
All lead and copper levels measured between the PQL and MDL must be either reported as measured or they can be reported as one-half the PQL specified for lead and copper in paragraph (a)(1)(ii) of this section. All levels below the lead and copper MDLs must be reported as zero.	§141.89 (a)(3)			
All copper levels measured between the PQL and the MDL must be either reported as measured or they can be reported as one-half the PQL (0.025 mg/L). All levels below the copper MDL must be reported as zero.	§141.89 (a)(4)			
§141.90 Reporting requirements.				
All water systems shall report all of the following information to the State in accordance with this section.	§141.90		All water systems shall report all of the following information to the State in accordance with this section.	
Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring.	§141.90(a)		(a) *Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring except for small systems using the point-of-use compliance flexibility option*.	
Except as provided in paragraph (a)(1)(viii) of this section, a water system shall report the information specified below for all tap water samples specified in §141.86 and for all water quality parameter samples specified in §141.87 within the first 10 days following the end of each applicable monitoring period specified in §141.86 and §141.87 (*i.e.,* every six months, annually, every 3 years, or every 9 years). For monitoring periods with a duration less than six months, the end of the monitoring period is the last date samples can be collected during that period as specified in §§141.86 and 141.87.	§141.90 (a)(1)		(1) Except as provided in paragraph (a)(1)(viii) of this section, a water system shall report the information specified in paragraphs (a)(1)(i) through (ix) of this section, for all tap water samples specified in § 141.86 and for all water quality parameter samples specified in § 141.87 within the first 10 days following the end of each applicable monitoring period specified in §§ 141.86 and 141.87 (*i.e*., every six months, annually, every three years, or every nine years). For monitoring periods with a duration less than six months, the end of the monitoring period is the last date samples can be collected during that period as specified in §§ 141.86 and 141.87.	
The results of all tap samples for lead and copper including the location of each site and the criteria under §141.86(a) (3), (4), (5), (6), and/or (7) under which the site was selected for the system's sampling pool;	§141.90 (a)(1)(i)		(i) The results of all tap samples for lead and copper including the location of each site and the criteria under § 141.86(a)(3) through (8), and/or (9), under which the site was selected for the water system's sampling pool;	
Documentation for each tap water lead or copper sample for which the water system requests invalidation pursuant to §141.86(f)(2);	§141.90 (a)(1)(ii)		(ii) Documentation for each tap water lead or copper sample for which the water system requests invalidation pursuant to § 141.86(f)(2);	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Reserved	§141.90 (a)(1)(iii)		(iii) For lead service line systems, documentation of sampling pools with insufficient number of lead service line sites to meet the minimum number of sites criterion in § 141.86(c). (A) Community water systems shall document why the system was unable to meet the minimum number of sites in § 141.86(c) with sites meeting the criteria under § 141.86(a)(3) or (4) with the inventory developed under § 141.84(a). (B) Non-transient, non-community water systems shall document why the system was unable to meet the minimum number of sites in § 141.86(c) with sites meeting the criteria under § 141.86(a)(7) with the inventory developed under § 141.84(a).	
The 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with §141.80(c)(3)), unless the State calculates the system's 90th percentile lead and copper levels under paragraph (h) of this section;	§141.90 (a)(1)(iv)		(iv) The 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with § 141.80(c)(4) or (c)(4)(ii)), unless the State calculates the water system's 90th percentile lead and copper levels under paragraph (h) of this section;	
With the exception of initial tap sampling conducted pursuant to §141.86(d)(1), the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;	§141.90 (a)(1)(v)		(v) The water system shall identify any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;	
The results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under §141.87 (b)-(e);	§141.90 (a)(1)(vi)		(vi) The results of all tap samples for pH, and where applicable, alkalinity, orthophosphate, or silica collected under § 141.87(b) through (e);	
The results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under §141.87 (b)-(e);	§141.90 (a)(1)(vii)		(vii) The results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under § 141.87 (b) through (e);	
A water system shall report the results of all water quality parameter samples collected under §141.87(c) through (f) during each six-month monitoring period specified in §141.87(d) within the first 10 days following the end of the monitoring period unless the State has specified a more frequent reporting requirement.	§141.90 (a)(1)(viii)		(viii) A water system shall report the results of all water quality parameter samples collected under § 141.87(c) through (f) during each 6-month monitoring period specified in § 141.87(d) within the first 10 days following the end of the monitoring period unless the State has specified a more frequent reporting requirement.	
		§141.90 (a)(1)(ix)	(ix) A copy of the tap sampling protocol provided to residents or those sampling, to verify that pre-stagnation flushing, aerator cleaning or removal and the use of narrow-necked collection bottles were not included as recommendations.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
For a non-transient non-community water system, or a community water system meeting the criteria of §141.85(b)(7), that does not have enough taps that can provide first-draw samples, the system must either: (i) Provide written documentation to the State identifying standing times and locations for enough non-first-draw samples to make up its sampling pool under §141.86(b)(5) by the start of the first applicable monitoring period under §141.86(d) that commences after April 11, 2000, unless the State has waived prior State approval of non-first-draw sample sites selected by the system pursuant to §141.86(b)(5); or (ii) If the State has waived prior approval of non-first-draw sample sites selected by the system, identify, in writing, each site that did not meet the six-hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to §141.86(b)(5) and include this information with the lead and copper tap sample results required to be submitted pursuant to paragraph (a)(1)(i) of this section.	§141.90 (a)(2)		(2) For a non-transient non-community water system, or a community water system meeting the criteria of § 141.85(b)(7), that does not have enough taps that can provide first-draw samples, the water system must either: (i) Provide written documentation to the State identifying standing times and locations for enough non-first-draw samples to make up its sampling pool under § 141.86(b)(5) by the start of the first applicable monitoring period under § 141.86(d) unless the State has waived prior State approval of non-first-draw sample sites selected by the water system pursuant to § 141.86(b)(5); or (ii) If the State has waived prior approval of non-first-draw sample sites selected by the water system, identify, in writing, each site that did not meet the 6-hour minimum stagnation time and the length of stagnation time for that particular substitute sample collected pursuant to § 141.86(b)(5) and include this information with the lead and copper tap sample results required to be submitted pursuant to paragraph (a)(1)(i) of this section.	
At a time specified by the State, or if no specific time is designated by the State, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under §141.81(b)(3), a water system subject to reduced monitoring pursuant to §141.86(d)(4), or a water system subject to a monitoring waiver pursuant to §141.86(g), shall submit written documentation to the State describing the change or addition. The State must review and approve the addition of a new source or long-term change in treatment before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor products (e.g., orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.	§141.90 (a)(3)		(3) At a time specified by the State, or if no specific time is designated by the State, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a water system shall submit written documentation to the State describing the change or addition referred to in § 141.86(d)(4). The State must review and approve the addition of a new source or long-term change in treatment before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (*e.g.*, alum to ferric chloride), and switching corrosion inhibitor products (*e.g.*, orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the water system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Any small system applying for a monitoring waiver under §141.86(g), or subject to a waiver granted pursuant to §141.86(g)(3), shall provide the following information to the State in writing by the specified deadline: (i) By the start of the first applicable monitoring period in §141.86(d), any small water system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of §§141.86(g)(1) and (2). (ii) No later than nine years after the monitoring previously conducted pursuant to §141.86(g)(2) or §141.86(g)(4)(i), each small system desiring to maintain its monitoring waiver shall provide the information required by §§141.86(g)(4)(i) and (ii). (iii) No later than 60 days after it becomes aware that it is no longer free of lead-containing and/or copper-containing material, as appropriate, each small system with a monitoring waiver shall provide written notification to the State, setting forth the circumstances resulting in the lead-containing and/or copper-containing materials being introduced into the system and what corrective action, if any, the system plans to remove these materials. (iv) By October 10, 2000, any small system with a waiver granted prior to April 11, 2000 and that has not previously met the requirements of §141.86(g)(2) shall provide the information required by that paragraph.	§141.90 (a)(4)		(4) Any small water system applying for a monitoring waiver under § 141.86(g), or subject to a waiver granted pursuant to § 141.86(g)(3), shall provide the following information to the State in writing by the specified deadline: (i) By the start of the first applicable monitoring period in § 141.86(d), any small water system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of §§ 141.86(g)(1) and (2). (ii) No later than nine years after the monitoring previously conducted pursuant to § 141.86(g)(2) or § 141.86(g)(4)(i), each small water system desiring to maintain its monitoring waiver shall provide the information required by §§ 141.86(g)(4)(i) and (ii). (iii) No later than 60 days after it becomes aware that it is no longer free of lead-containing and/or copper-containing material, as appropriate, each small water system with a monitoring waiver shall provide written notification to the State, setting forth the circumstances resulting in the lead-containing and/or copper-containing materials being introduced into the water system and what corrective action, if any, the water system plans to remove these materials. (iv) Reserved.	
Each ground water system that limits water quality parameter monitoring to a subset of entry points under §141.87(c)(3) shall provide, by the commencement of such monitoring, written correspondence to the State that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.	§141.90 (a)(5)		(5) Each groundwater system that limits water quality parameter monitoring to a subset of entry points under § 141.87(c)(3) shall provide, by the commencement of such monitoring, written correspondence to the State that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the water system.	
Source water monitoring reporting requirements.	§141.90(b)			
A water system shall report the sampling results for all source water samples collected in accordance with §141.88 within the first 10 days following the end of each source water monitoring period (*i.e.*, annually, per compliance period, per compliance cycle) specified in §141.88.	§141.90 (b)(1)		(1) A water system shall report the sampling results for all source water samples collected in accordance with § 141.88 within the first 10 days following the end of each source water monitoring period (*i.e.*, annually, per compliance period, per compliance cycle) specified in § 141.88.	
With the exception of the first round of source water sampling conducted pursuant to §141.88(b), the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.	§141.90 (b)(2)		(2) With the exception of the first round of source water sampling conducted pursuant to § 141.88(b), the water system shall specify any site which was not sampled during previous monitoring periods and include an explanation of why the sampling point has changed.	
Corrosion control treatment reporting requirements. By the applicable dates under §141.81, systems shall report the following information:	§141.90(c)		(c) *Corrosion control treatment reporting requirements*. By the applicable dates under § 141.81, water systems shall report the following information:	
For systems demonstrating that they have already optimized corrosion control, information required in §141.81(b) (2) or (3).	§141.90 (c)(1)		(1) For water systems demonstrating that they have already optimized corrosion control, information required in § 141.81(b) (2) or (3).	
For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under §141.82(a).	§141.90 (c)(2)		(2) For water systems required to reoptimize corrosion control, their recommendation regarding optimal corrosion control treatment under § 141.82(a).	
For systems required to evaluate the effectiveness of corrosion control treatments under §141.82(c), the information required by that paragraph.	§141.90 (c)(3)		(3) For water systems required to evaluate the effectiveness of corrosion control treatments under § 141.82(c), the information required by that paragraph.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
For systems required to install optimal corrosion control designated by the State under §141.82(d), a letter certifying that the system has completed installing that treatment.	§141.90 (c)(4)		(4) For water systems required to install optimal corrosion control designated by the State under § 141.82(d), a letter certifying that the water system has completed installing that treatment.	
Source water treatment reporting requirements. By the applicable dates in §141.83, systems shall provide the following information to the State:	§141.90(d)		(d) *Source water treatment reporting requirements*. By the applicable dates in § 141.83, water systems shall provide the following information to the State:	
If required under §141.83(b)(1), their recommendation regarding source water treatment;	§141.90 (d)(1)		(1) If required under § 141.83(b)(1), their recommendation regarding source water treatment;	
For systems required to install source water treatment under §141.83(b)(2), a letter certifying that the system has completed installing the treatment designated by the State within 24 months after the State designated the treatment.	§141.90 (d)(2)		(2) For water systems required to install source water treatment under § 141.83(b)(2), a letter certifying that the water system has completed installing the treatment designated by the State within 24 months after the State designated the treatment.	
Lead service line replacement reporting requirements. Systems shall report the following information to the State to demonstrate compliance with the requirements of §141.84:	§141.90(e)		(e) *Lead service line inventory and replacement reporting requirements*. Water systems shall report the following information to the State to demonstrate compliance with the requirements of § 141.84:	
No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in §141.84(a), the system must submit written documentation to the State of the material evaluation conducted as required in §141.86(a), identify the initial number of lead service lines in its distribution system at the time the system exceeds the lead action level, and provide the system's schedule for annually replacing at least 7 percent of the initial number of lead service lines in its distribution system.	§141.90 (e)(1)		(1) No later than 12 months after the end of a monitoring period in which a water system exceeds the lead action level in sampling referred to in § 141.84(f), the water system must submit written documentation to the State of the material evaluation conducted as required in § 141.84(a), identify the initial number of lead service lines in its distribution system at the time the water system exceeds the lead action level, and provide the water system's schedule for annually replacing at least 3 percent of the initial number of lead service lines in its distribution system.	
No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in §141.84(a), and every 12 months thereafter, the system shall demonstrate to the State in writing that the system has either: (i) Replaced in the previous 12 months at least 7 percent of the initial lead service lines (or a greater number of lines specified by the State under §141.84(e)) in its distribution system, or (ii) Conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line(s), taken pursuant to §141.86(b)(3), is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and/or which meet the criteria in §141.84(c) shall equal at least 7 percent of the initial number of lead lines identified under paragraph (e)(1) of this section (or the percentage specified by the State under §141.84(e)).	§141.90 (e)(2)		(2) No later than 12 months after the end of a monitoring period in which a water system exceeds the lead action level in sampling referred to in § 141.84(f), and every 12 months thereafter, the water system shall certify to the State in writing that the water system has: (i) Replaced in the previous 12 months at least 3 percent of the initial lead service lines (or a greater number of lines specified by the State under § 141.84(f)(10)) in its distribution system, (ii) Conducted consumer notification as specified in § 141.84(e). (iii) Additionally, the water system must certify to the State that it delivered public education materials to the affected consumers as specified in § 141.85 (a) and the notification of lead service line materials as specified in § 141.85(e).	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
The annual letter submitted to the State under paragraph (e)(2) of this section shall contain the following information: (i) The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule; (ii) The number and location of each lead service line replaced during the previous year of the system's replacement schedule; (iii) If measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.	§141.90 (e)(3)		(3) The annual letter submitted to the State under paragraph (e)(2) of this section shall contain the following information: (i) The number of lead service lines scheduled to be replaced during the previous year of the water system's replacement schedule; (ii) The location of each lead service line replaced, and total number replaced during the previous year of the water system's replacement schedule; (iii) The certification that the water system has notified the resident(s) served by the lead service line at least 45 days prior to the planned lead service line replacement or within 24 hours of an emergency full or partial replacement; (iv) The certification that the water system delivered lead service line information materials in § 141.85(e) to the affected consumers; and (v) The certification that results of samples collected between three months and six months after the date of a full or partial lead service line replacement were provided to the customer in accordance with the timeframes in 141.85(d)(2). Mailed notices post-marked within three business days of receiving the results shall be considered "on time."	
Any system which collects lead service line samples following partial lead service line replacement required by §141.84 shall report the results to the State within the first ten days of the month following the month in which the system receives the laboratory results, or as specified by the State. States, at their discretion may eliminate this requirement to report these monitoring results. Systems shall also report any additional information as specified by the State, and in a time and manner prescribed by the State, to verify that all partial lead service line replacement activities have taken place.	§141.90 (e)(4)		(4) RESERVE	
		§141.90 (e)(5)	(5) No later than the compliance date of the rule, the water system must submit to the State an inventory of lead service lines as required in § 141.84 (a), and every 12 months thereafter, any water system that has lead service lines must submit to the State an updated inventory that includes the number of lead service lines remaining in the distribution system as required in § 141.84 (a). (i) Any water system that contains a lead service line in their distribution system must submit to the State, as specified in section § 141.84 (b) a lead service line replacement plan at the same time the lead service line inventory is submitted. (ii) Any water system that contains a lead service line in their distribution system or a service line of unknown material must certify to the State annually that it conducted consumer notification as specified in § 141.85(e). (iii) Any water system that contains a lead service line in their distribution system or a service line of unknown material must certify to the State annually that it delivered lead service line information materials to the affected consumers as specified in § 141.85(e).	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.90 (e)(6)	(6) No later than 12 months after the end of a monitoring period in which a water system exceeds the lead trigger level but not the lead action level in sampling referred to in § 141.84(e) has replaced lead service lines at the annual goal rate. In addition, every 12 months thereafter, the water system shall certify to the State in writing that the water system has: (i) Replaced in the previous 12 months, at least enough of the initial lead service lines to meet the annual goal-based rate set by the State under § 141.84(d)(1) in its distribution system; (ii) Conducted consumer notification as specified in § 141.85(f); (iii) Additionally, the water system must certify to the State that it delivered the notification of lead service line materials as specified in § 141.85(b); and (iv) A water system that does not meet its annual service line replacement goal as required under § 141.84(f) shall certify to the State in writing that the water system has conducted customer outreach as specified in § 141.85 (g).	
Public education program reporting requirements.	§141.90(f)			
Any water system that is subject to the public education requirements in §141.85 shall, within ten days after the end of each period in which the system is required to perform public education in accordance with §141.85(b), send written documentation to the State that contains: (i) A demonstration that the system has delivered the public education materials that meet the content requirements in §141.85(a) and the delivery requirements in §141.85(b); and (ii) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.	§141.90 (f)(1)		(1) Any water system that is subject to the public education requirements in § 141.85 shall, within 10 days after the end of each period in which the water system is required to perform public education in accordance with § 141.85(b), send written documentation to the State that contains: (i) A demonstration that the water system has delivered the public education materials that meet the content requirements in § 141.85(a) and the delivery requirements in § 141.85(b); and (ii) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.	
Unless required by the State, a system that previously has submitted the information required by paragraph (f)(1)(ii) of this section need not resubmit the information required by paragraph (f)(1)(ii) of this section, as long as there have been no changes in the distribution list and the system certifies that the public education materials were distributed to the same list submitted previously.	§141.90 (f)(2)		(2) Unless required by the State, a water system that previously has submitted the information required by paragraph (f)(1)(ii) of this section need not resubmit the information required by paragraph (f)(1)(ii) of this section, as long as there have been no changes in the distribution list and the water system certifies that the public education materials were distributed to the same list submitted previously.	
No later than 3 months following the end of the monitoring period, each system must mail a sample copy of the consumer notification of tap results to the State along with a certification that the notification has been distributed in a manner consistent with the requirements of §141.85(d).	§141.90 (f)(3)		(3) No later than three months following the end of the monitoring period, each water system must mail a sample copy of the consumer notification of tap results to the State along with a certification that the notification has been distributed in a manner consistent with the requirements of § 141.85(d).	
		§141.90 (f)(4)	(4) Annually on July 1, a demonstration that the water system delivered annual notification to customers with a lead service line or service line of unknown material in accordance with § 141.85(e).	
		§141.90 (f)(5)	(5) Annually on July 1, a demonstration that the water conducted an outreach activity in accordance with § 141.85(g) when failing to meet the lead service line replacement goal as specified in § 141.84(f).	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Reporting of additional monitoring data. Any system which collects sampling data in addition to that required by this subpart shall report the results to the State within the first ten days following the end of the applicable monitoring period under §§141.86, 141.87 and 141.88 during which the samples are collected.	§141.90(g)		(g*) Reporting of additional monitoring data*. Any water system which collects sampling data in addition to that required by this subpart shall report the results to the State within the first 10 days following the end of the applicable monitoring period under §§ 141.86, 141.87 and 141.88 during which the samples are collected. This includes the monitoring data pertaining to "find and fix" pursuant to §§ 141.86(h) and 141.87 (g).	
Reporting of 90th percentile lead and copper concentrations where the State calculates a system's 90th percentile concentrations A water system is not required to report the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by paragraph (a)(1)(iv) of this section if:	§141.90(h)		*(h) Reporting of 90th percentile lead and copper concentrations where the State calculates a water system's 90th percentile concentrations.* A water system is not required to report the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by paragraph (a)(1)(iv) of this section if:	
he State has previously notified the water system that it will calculate the water system's 90th percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to paragraph (h)(2)(i) of this section, and has specified a date before the end of the applicable monitoring period by which the system must provide the results of lead and copper tap water samples;	§141.90 (h)(1)		(1) The State has previously notified the water system that it will calculate the water system's 90th percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to paragraph (h)(2)(i) of this section, and has specified a date before the end of the applicable monitoring period by which the water system must provide the results of lead and copper tap water samples;	
The system has provided the following information to the State by the date specified in paragraph (h)(1) of this section: (i) The results of all tap samples for lead and copper including the location of each site and the criteria under §141.86(a)(3), (4), (5), (6), and/or (7) under which the site was selected for the system's sampling pool, pursuant to paragraph (a)(1)(i) of this section; and (ii) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed; and	§141.90 (h)(2)		(2) The water system has provided the following information to the State by the date specified in paragraph (h)(1) of this section: (i) The results of all tap samples for lead and copper including the location of each site and the criteria under § 141.86(a)(3) through (8) and/or (9), under which the site was selected for the water system's sampling pool, pursuant to paragraph (a)(1)(i) of this section; and (ii) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed; and	
The State has provided the results of the 90th percentile lead and copper calculations, in writing, to the water system before the end of the monitoring period.	§141.90 (h)(3)		(3) The State has provided the results of the 90th percentile lead and copper calculations, in writing, to the water system before the end of the monitoring period.	
		§141.90(i)	(i) *Reporting requirements for a community water system's public education and sampling in schools and child care facilities*.	
		§141.90(i)(1)	(1) A community water system shall send a report to the State by July 1 of each year for the previous calendar year's activity. The report must include the following:	
		§141.90(i)(1)(i)	(i) Certification that it made a good faith effort to identify schools and child care facilities in accordance with § 141.92(a). The good faith effort may include reviewing customer records and requesting lists of schools and child care facilities from the primacy agency or other licensing agency. A water system that certifies that no schools or child care facilities are served by the water system is not required to include information in paragraph (i)(1)(ii) through (i)(1)(iii) of this section in the report.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.90(i)(1)(ii)	(ii) Certification that the water system has completed the notification and sampling requirements of §§ 141.86 and 141.92 at a minimum of 20 percent of schools and child care facilities; (A) The number of schools and child care facilities served by the water system; (B) The number of schools and child care facilities sampled in the calendar year; (C) The number of schools and child care facilities that have refused sampling; (D) Information pertaining to attempts to gain entry for sampling that were declined by the customer; and	
		§141.90(i)(1)(iii)	(iii) Certification that sampling results were provided to schools, child care facilities, and local or State health departments.	
		§141.90(i)(1)(iv)	(iv) Certification of compliance with an alternative school and childcare testing program at least as stringent paragraphs (a) through (c) of § 141.92, if applicable.	
		§141.90(j)	(j) *Small system compliance flexibility option using point-of-use devices.* Small water systems and non-transient, non-community water systems shall report the results from the tap sampling required under § 141.93 and any corrective actions taken if the trigger level was exceeded in that monitoring. Small water systems shall also provide documentation to certify maintenance of the point-of-use devices if requested by the State.	
§141.91 Recordkeeping requirements.				
Any system subject to the requirements of this subpart shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, State determinations, and any other information required by §§141.81 through 141.88. Each water system shall retain the records required by this section for no fewer than 12 years.	§141.91			
§ 141.92 Monitoring for lead in schools and child care facilities.				
		§141.92	All community water systems must conduct directed public education to schools and child care facilities served by the water system, including any facilities that are consecutive water systems if those schools or child care facilities were constructed prior to January 1, 2014.	
		§141.92(a)	*(a) Public Education to schools and child care facilities.*	
		§141.92(a)(1)	(1) By the compliance date for the rule, each water system shall compile a list of schools or licensed child care facilities served by the system. The provisions of this section do not apply to a school or child care facility that is a regulated as a public water system, including consecutive public water systems.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.92(a)(2)	(2) Each water system shall contact schools or licensed child care facilities identified by the system in paragraph (a) of this section to provide: (i) Information about health risks from lead in drinking water on at least an annual basis; (ii) Notification that the water system will be conducting sampling for lead at the facility, including information about testing for lead in schools and child care facilities (EPA's 3Ts for Reducing Lead in Drinking Water Toolkit, EPA-815-B-18-007 or subsequent EPA guidance), and; (iii) Instructions for identifying outlets for sampling and preparing for a sampling event 30 days prior to the event.	
		§141.92(a)(2) (again)	(2) The water system must include documentation in the proposed reporting requirement in § 141.90(i) if a school or child care facility refuses entry or otherwise declines to participate in the monitoring or education requirements of this section.	
		§141.92(b)	*(b) Monitoring for lead in schools and child care facilities.*	
		§141.92(b)(1)	(1) A water system shall collect five samples per school and two samples per child care facility at outlets typically used for consumption. The outlets shall not have point-of-use (POU) devices and shall consist of the following locations:	
		§141.92(b)(1)(i)	(i) For schools: two drinking water fountains, one kitchen faucet used for food or drink preparation, one classroom faucet, and one nurse's office faucet, as available.	
		§141.92(b)(1)(ii)	(ii) For child care facilities: one drinking water fountain and one of either a kitchen faucet used for preparation of food or drink or one classroom faucet.	
		§141.92(b)(1)(iii)	(iii) If any facility has fewer than the required number of outlets, the water system shall sample all outlets used for consumption.	
		§141.92(b)(1)(iv)	(iv) If any facility does not contain the type of faucet listed above, the water system shall collect a sample from another outlet typically used for consumption as identified by the facility.	
		§141.92(b)(1)(v)	(v) Samples shall be collected from the cold water tap subject to the following additional requirements: (A) Each sample for lead shall be a first-draw sample; (B) The sample must be 250 ml in volume; (C) The water must have remained stationary in the plumbing system of the sampling site (building) for at least 8 but no more than 18 hours; (D) Samples may be collected by either the customer, school or child care facility, or the water system, and; (E) Samples shall be analyzed using acidification and the corresponding analytical methods in § 141.89.	
		§141.92(c)	*(c) Frequency of sample collection at schools and child care facilities.*	
		§141.92(c)(1)	(1) A water system shall collect samples from at least 20 percent of schools served by the system and 20 percent of child care facilities served by the system per year until all schools and child care facilities identified under paragraph (a) of this section have been sampled or have declined to participate.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.92(c)(2)	(2) A water system shall continue to collect samples from at least 20 percent of school and child care facilities in its distribution system each year thereafter.	
		§141.92(c)(3)	(3) A water system shall conduct monitoring at all schools and child care facilities at least once every five years.	
		§141.92(c)(4)	(4) The water system must include documentation in the report required in § 141.90(i) if a school or child care facility refuses entry or otherwise declines to allow the system to conduct the monitoring or education requirements of this section.	
		§141.92(d)	*(d) Alternative School Sampling Programs*	
		§141.92(d)(1)	(1) If Local or State law or regulations require schools and childcare facilities to be tested, by either the school or the water system, in a way that is at least as stringent as paragraphs (a) through (c) of this section, the water system may execute that program to comply with the requirements of this section.	
		§141.92(d)(2)	(2) The water system must include documentation in the report required in § 141.90(i) if a school or child care facility refuses entry or otherwise declines to allow the system to conduct the monitoring or education requirements of this section.	
		§141.92(e)	*(e) Confirmation or revision of schools and child care facilities in inventory.* A water system shall either confirm that there have been no changes to its list of schools and child care facilities served by the system developed pursuant to § 141.92(a), or submit a revised list at least once every five years.	
		§141.92(f)	*(f) Notification of Results.* A water system shall provide analytical results as soon as practicable but no late than 30 days after receipt of the results to: (1) the school or child care facility, along with information about remedial options; (2) the local or State health department; and (3) the primacy agency.	
§ 141.93 Small Water System Compliance Flexibility				
		§141.93	The compliance alternatives described in this section apply to small community water systems serving 10,000 or fewer persons or non-transient non-community water systems.	
		§141.93(a)	(a) A small community water system that exceeds the lead trigger level but meets the lead and copper action levels must evaluate compliance options (1) through (3) of this section and make a compliance option recommendation to the State within six months of the end of the monitoring period in which the exceedance occurred. A State must approve the recommendation or designate an alternative from compliance options (1) through (3) of this section within six months of the recommendation by the water system. If the water system subsequently exceeds the lead action level it must implement the approved option. Community water systems must select from the following compliance options:	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.93(a)(1)	(1) Lead Service Line Replacement. A water system shall implement a full lead service line replacement program and replace its lead service lines on a schedule approved by the State and shall complete replacement of all lead service lines within 15 years, even if its 90th percentile is below the action level in future monitoring periods.	
		§141.93(a)(2)	(2) Corrosion Control Treatment. A water system must install and maintain corrosion control treatment in accordance with § 141.82, even if its 90th percentile is below the action level in future monitoring periods. Any water system that has corrosion control treatment installed must re-optimize as per § 141.82(d).	
		§141.93(a)(3)	(3) Point-of-Use Devices. A water system must install, maintain, and monitor POU devices in each household or building, even if its 90th percentile is below the action level in future monitoring periods. (i) A community water system must install a minimum of one POU device (at one tap) in every household or building in its distribution system. (ii) The POU device must be certified by the American National Standards Institute to reduce lead in drinking water, and (iii) The POU device must be maintained by the water system to ensure continued effective filtration, including but not limited to changing filter cartridges and resolving any operational issues. (iv) The community water system must monitor one-third of the POU devices each year and all POU devices must be monitored within a three-year cycle. First-draw tap samples collected under this section must be taken after water passes through the POU device to assess its performance. Samples should be one-liter in volume and have had a minimum 6-hour stagnation time. All samples must be at or below the lead trigger level. The system must document the problem and take corrective action at any site where the sample result exceeds the lead trigger level.	
		§141.93(b)	(b) A non-transient non-community water system that exceeds the lead trigger level but meets the lead and copper action levels must evaluate compliance options (1) through (4) of this section and make a compliance option recommendation to the State within six months of the end of the monitoring period in which the exceedance occurred. A State must approve the recommendation or designate an alternative from compliance options (1) through (4) of this section within six months of the recommendation by the water system. If the water system subsequently exceeds the lead action level it must implement the approved option. Non-transient non-community water system must select from the following compliance options:	
		§141.93(b)(1)	(1) Lead Service Line Replacement. A water system shall implement a full lead service line replacement program and replace its lead service lines on a schedule approved by the State and shall complete replacement of all lead service lines within 15 years, even if its 90th percentile is at or below the action level in future monitoring periods.	
		§141.93(b)(2)	(2) Corrosion Control Treatment. A water system must install and maintain corrosion control treatment in accordance with § 141.82, even if its 90th percentile is below the action level in future monitoring periods. Any water system that has corrosion control treatment installed must re-optimize as per § 141.82(e).	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.93(b)(3)	(3) Point-of-Use Devices. A water system must install, maintain, and monitor POU devices in each household or building, even if its 90th percentile is at or below the action level in future monitoring periods. (i) A non-transient non-community water system must provide a POU device to every tap that is used for cooking and/or drinking. (ii) The POU device must be certified by the American National Standards Institute to reduce lead in drinking water and: (iii) The POU device must be maintained by the water system to ensure continued effective filtration, including but not limited to changing filter cartridges and resolving any operational issues. (iv) The non-transient non-community water system must monitor one-third of the POU devices each year and all POU devices must be monitored within a three-year cycle. First-draw tap samples collected under this section must be taken after water passes through the POU device to assess its performance. Samples should be one-liter in volume and have had a minimum 6-hour stagnation time. All samples must be at or below the lead trigger level. The system must document the problem and take corrective action at any site where the sample result exceeds the lead trigger level.	
		§141.93(b)(4)	(4) Replacement of Lead-Bearing Plumbing. A water system must replace all plumbing that is not lead free in accordance with Section 1417 of the Safe Drinking Water Act, as amended by the Reduction of Lead in Drinking Water Act and any future amendments applicable at the time of replacement, including a lead service line, even if its 90th percentile is below the action level in future monitoring periods. A water system must have control over all plumbing in its buildings. The replacement of all lead-bearing plumbing must occur on a schedule established by the State, not to exceed one year.	
		§141.93(c)	(c) A small community water system that exceeds the lead action level but meets the copper action level must evaluate (1) through (3) of this section and make a compliance option recommendation to the State within six months of the end of the monitoring period in which the exceedance occurred. A State must approve the recommendation or designate an alternative from compliance options (1) through (3) of this section within six months of the recommendation by the water system. If the water system subsequently exceeds the lead action level it must implement the approved option. Community water systems must select from the following compliance options:	
		§141.93(c)(1)	(1) Lead Service Line Replacement. A water system shall implement full lead service line replacement program and replace its lead service lines on a schedule approved by the State and shall complete replacement of all lead service lines within 15 years, even if its 90th percentile is below the action level in future monitoring periods.	
		§141.93(c)(2)	(2) Corrosion Control Treatment. A water system must install and maintain corrosion control treatment in accordance with § 141.82, even if its 90th percentile is below the action level in future monitoring periods.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.93(c)(3)	(3) Point-of-Use Devices. A water system must install, maintain, and monitor POU devices in each household or building, even if its 90th percentile is below the action level in future monitoring periods. (i) A community water system must install a minimum of one POU device (at one tap) in every household or building in its distribution system. (ii) The POU device must be certified by the American National Standards Institute to reduce lead in drinking water, and (iii) The POU device must be maintained by the water system to ensure continued effective filtration, including but not limited to changing filter cartridges and resolving any operational issues. (iv) The community water system must monitor one-third of the POU devices each year and all POU devices must be monitored within a three-year cycle. First-draw tap samples collected under this section must be taken after water passes through the POU device to assess its performance. Samples should be one-liter in volume and have had a minimum 6-hour stagnation time. All samples must be at or below the lead trigger level. The system must document the problem and take corrective action at any site where the sample result exceeds the lead trigger level.	
		§141.93(d)	(d) A non-transient non-community water system that exceeds the lead action level but does not exceed the copper action level must evaluate (1) through (4) of this section and make a compliance recommendation to the State from compliance options (1) through (4) of this section within six months of the end of the monitoring period in which the exceedance occurred. A State must approve the recommendation or designate an alternative within six months of the recommendation by the water system. If the water system subsequently exceeds the lead action level it must implement the approved option. Non-transient non-community water systems must select from the following compliance options:	
		§141.93(d)(1)	(1) Lead Service Line Replacement. A water system shall implement full lead service line replacement program and replace its lead service lines on a schedule approved by the State and shall complete replacement of all lead service lines within 15 years, even if its 90th percentile is at or below the action level in future monitoring periods.	
		§141.93(d)(2)	(2) Corrosion Control Treatment. A water system must install and maintain corrosion control treatment in accordance with § 141.82, even if its 90th percentile is at or below the action level in future monitoring periods. Any water system that has corrosion control treatment installed must re-optimize as per § 141.82(e.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§141.93(d)(3)	(3) Point-of-Use Devices. A water system must install, maintain, and monitor POU devices in each household or building, even if its 90th percentile is at or below the action level in future monitoring periods. (i) A non-transient non-community water system must provide a POU device to every tap that is used for cooking and/or drinking. (ii) The POU device must be certified by the American National Standards Institute to reduce lead in drinking water and: (iii) The POU device must be maintained by the water system to ensure continued effective filtration, including but not limited to changing filter cartridges and resolving any operational issues. (iv) The non-transient non-community water system must monitor one-third of the POU devices each year and all POU devices must be monitored within a three-year cycle. First-draw tap samples collected under this section must be taken after water passes through the POU device to assess its performance. Samples should be one-liter in volume and have had a minimum 6-hour stagnation time. All samples must be below the lead trigger level. The system must document the problem and take corrective action at any site where the sample result exceeds the lead trigger level.	
		§141.93(d)(4)	(4) Replacement of Lead-Bearing Plumbing. A water system must replace all plumbing that is not lead free in accordance with section 1417 of the Safe Drinking Water Act as amended by the Reduction of Lead in Drinking Water Act and any future amendments applicable at the time of replacement, including a lead service line, even if its 90th percentile is below the action level in future monitoring periods. A water system must have control over all plumbing in its buildings. The replacement of all lead-bearing plumbing must occur on a schedule established by the State, not to exceed one year.	
Subpart O—Consumer Confidence Reports				
§ 141.153 Content of the reports				
(d) Information on detected contaminants.	§141.15(d)			
(4) For detected regulated contaminants (listed in appendix A to this subpart), the table(s) must contain:	§141.15 (d)(4)			
(vi) For lead and copper: the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level;	§141.15 (d)(4)(vi)		(vi) For lead and copper: the 90th percentile concentration of the most recent round of sampling, the number of sampling sites exceeding the action level, and the range of tap sampling results;	
§141.154 Required additional health information.				
Every report must include the following lead-specific information:	§141.154(d)			

<table>
<tr><th>Federal Requirement</th><th>Federal Citation</th><th>Revised Citation</th><th>New/Revised Regulation</th><th>Difference between STR and LTR Regulation</th></tr>
<tr><td>A short informational statement about lead in drinking water and its effects on children. The statement must include the following information:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.</td><td>§141.154 (d)(1)</td><td></td><td>(1) A short informational statement about lead in drinking water and its effects on children. The statement must include the following information:
If present, lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family’s risk. Before drinking, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified to remove lead from drinking water. If you are concerned about lead in your water you may wish to have your water tested, contact [NAME OF UTILITY and CONTACT INFORMATION]. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.</td><td></td></tr>
<tr><td>A system may write its own educational statement, but only in consultation with the State.</td><td>§141.154 (d)(2)</td><td></td><td></td><td></td></tr>
<tr><td colspan="5">Appendix A to Subpart O</td></tr>
<tr><td>APPENDIX A TO SUBPART O OF PART 141 – REGULATED CONTAMINANTS

<table><tr><td>Lead (ppb)</td><td>AL = .015</td><td>1000</td><td>AL = 15</td><td>0</td><td>Corrosion of household plumbing systems; Erosion of natural deposits</td><td>Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.</td></tr></table></td><td colspan="2">APPENDIX A TO SUBPART O OF PART 141 – REGULATED CONTAMINANTS

<table><tr><td>Lead</td><td>AL = .015</td><td>1000</td><td>AL = 15</td><td>0</td><td>Corrosion of household plumbing systems, Erosion of natural deposits.</td><td>Exposure to lead can cause serious health effects in all age groups. Infants and children who drink water containing lead could have decreases in IQ and attention span and increases in learning and behavior problems. Lead exposure among women who are pregnant increases prenatal risks. Lead exposure among women who later become pregnant has similar risks if lead stored in the mother’s bones is released during pregnancy. Recent science suggests that adults who drink water containing lead have increased risks of heart disease, high blood pressure, kidney or nervous system problems.</td></tr></table></td><td></td></tr>
</table>

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Subpart Q—Public Notification of Drinking Water Violations				
§141.201 General public notification requirements				
Table 1 to §141.201—Violation Categories and Other Situations Requiring a Public Notice *NONE:		**TABLE 1 TO § 141.201—VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A** Public Notice ******* (3) Special public notices: ***** (vi) Exceedance of the lead action level. ******* *****		
(c) *Who must be notified?*	§141.201 (c)			
(3) A copy of the notice must also be sent to the primacy agency, in accordance with the requirements under §141.31(d).	§141.201 (c)(3)		(3) A copy of the notice must also be sent to the primacy agency and the Administrator (as applicable) in accordance with the requirements of § 141.31(d).	
§141.202 Tier 1 Public Notice – Form, manner and frequency of notice				
Table 1 to §141.202—Violation Categories and Other Situations Requiring a Tier 1 Public Notice **NONE*		**Table 1 to § 141.202 – Violation Categories and Other Situations Requiring a Tier 1 Public Notice** ******* (10) Exceedance of the Action Level for lead as specified in § 141.80(c).		

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Appendix A to Subpart O				
Appendix A to Subpart Q of Part 141—NPDWR Violations and Other Situations Requiring Public Notice[1] *None		APPENDIX A TO SUBPART Q OF PART 141 – NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE		

*******				
C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)				
*******				
2. Exceedance of the Action Level for lead	1	141.80(c)		
*******				

<table>
<tr><th>Federal Requirement</th><th>Federal Citation</th><th>Revised Citation</th><th>New/Revised Regulation</th><th>Difference between STR and LTR Regulation</th></tr>
<tr><td colspan="5">Appendix B to Subpart O</td></tr>
<tr><td>Appendix B to Subpart Q of Part 141—Standard Health Effects Language for Public Notification

<table><tr><td>23. Lead</td><td>Zero</td><td>TT[13]</td><td>Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.</td></tr></table></td><td></td><td></td><td>APPENDIX B TO SUBPART Q OF PART 141 – STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

<table><tr><td colspan="4">D. Lead and Copper Rule</td></tr><tr><td>*******</td><td>*******</td><td>*******</td><td>*******</td></tr><tr><td>23. Lead</td><td>zero</td><td>TT[13]</td><td>Exposure to lead can cause serious health effects in all age groups. Infants and children who drink water containing lead could have decreases in IQ and attention span and increases in learning and behavior problems. Lead exposure among women who are pregnant increases prenatal risks. Lead exposure among women who later become pregnant has similar risks if lead stored in the mother’s bones is released during pregnancy. Recent science suggests that adults who drink water containing lead have increased risks of heart disease, high blood pressure, kidney and nervous system problems</td></tr><tr><td>*******</td><td>*******</td><td>*******</td><td>*******</td></tr><tr><td>*******</td><td>*******</td><td>*******</td><td>*******</td></tr></table></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5">PART 142</td></tr>
<tr><td colspan="5">Subpart B—Primary Enforcement Responsibility</td></tr>
<tr><td colspan="5">§142.14 Records kept by States</td></tr>
<tr><td>Each State which has primary enforcement responsibility shall retain, for not less than 12 years, files which shall include for each such public water system in the State:</td><td>§142.14(d)</td><td></td><td></td><td></td></tr>
<tr><td>Records of the currently applicable or most recent State determinations, including all supporting information and an explanation of the technical basis for each decision, made under the following provisions of 40 CFR, part 141, subpart I for the control of lead and copper:</td><td>§142.14 (d)(8)</td><td></td><td></td><td></td></tr>
<tr><td>Section 141.81(b)—for any water system deemed to be optimized under §141.81(b)(1) or (b)(3) of this chapter, any conditions imposed by the State on specific water systems to ensure the continued operation and maintenance of corrosion control treatment in place;</td><td>§142.14 (d)(8)(i)</td><td></td><td></td><td></td></tr>
<tr><td>Section 141.82(b)—decisions to require a water system to conduct corrosion control treatment studies;</td><td>§142.14 (d)(8)(ii)</td><td></td><td></td><td></td></tr>
<tr><td>Section 141.82(d)—designations of optimal corrosion control treatment;</td><td>§142.14 (d)(8)(iii)</td><td></td><td>(iii) Section 141.82(d) – designations of optimal corrosion control treatment and any simultaneous compliance considerations that factored into the designation;</td><td></td></tr>
<tr><td>Section 141.82(f)—designations of optimal water quality parameters;</td><td>§142.14 (d)(8)(iv)</td><td></td><td></td><td></td></tr>
</table>

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Section 141.82(h)—decisions to modify a public water system's optimal corrosion control treatment or water quality parameters;	§142.14 (d)(8)(v)			
Section 141.83(b)(2)—determinations of source water treatment;	§142.14 (d)(8)(vi)			
Section 141.83(b)(4)—designations of maximum permissible concentrations of lead and copper in source water;	§142.14 (d)(8)(vii)			
Section 141.84(e)—determinations establishing shorter lead service line service line replacement schedules under §141.84;	§142.14 (d)(8)(viii)		(viii) Section 141.84(e) – determinations of lead service line replacement goal rate as well as mandatory full lead service line service line replacement rates below 3 percent;	
Sections 141.81(b)(3)(iii), 141.86(d)(4)(vii), and 141.86(g)(4)(iii)—determinations of additional monitoring requirements and/or other actions required to maintain optimal corrosion control by systems monitoring for lead and copper at the tap less frequently than once every six months that change treatment or add a new source of water;	§142.14 (d)(8)(ix)			
Section 141.85—system-specific decisions regarding the content of written public education materials and/or the distribution of these materials;	§142.14 (d)(8)(x)			
Section 141.86(b)(5)—system-specific determinations regarding use of non-first-draw samples at non-transient non-community water systems, and community water systems meeting the criteria of §141.85(b)(7)(i) and (ii) of this chapter, that operate 24 hours a day;	§142.14 (d)(8)(xi)			
Section 141.86(c)—system-specific designations of sampling locations for systems subject to reduced monitoring;	§142.14 (d)(8)(xii)			
Section 141.86(d)(iv)(A)—system-specific determinations pertaining to alternative sample collection periods for systems subject to reduced monitoring;	§142.14 (d)(8)(xiii)			
Section 141.86(g)—determinations of small system monitoring waivers, waiver recertifications, and waiver revocations;	§142.14 (d)(8)(xiv)			
Section 141.87(c)(3)—determinations regarding representative entry point locations at ground water systems;	§142.14 (d)(8)(xv)			
Section 141.90(e)(4)—system-specific determinations regarding the submission of information to demonstrate compliance with partial lead service line replacement requirements; and	§142.14 (d)(8)(xvi)			
Section 141.90(f)—system-specific decisions regarding the resubmission of detailed documentation demonstrating completion of public education requirements.	§142.14 (d)(8)(xvii)			
		§142.14 (d)(8)(xvii)	(xviii) Section 141.88 – evaluation of water system source water or treatment changes;	
		§142.14 (d)(8)(xix)	(xix) Section 141.93 – identification of small water systems and non-transient non-community water systems utilizing the compliance alternatives, and the compliance alternative selected by the water system and the compliance option approved by the State;	
		§142.14 (d)(8)(xx)	(xx) Section 141.84(a) -- completed lead service line inventories and annual updates to inventories.	
Records of reports and any other information submitted by PWSs under §141.90 of this chapter, including records of any 90th percentile values calculated by the State under §141.90(h) of this chapter.	§142.14 (d)(9)			

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Records of State activities, and the results thereof, to: (i) Verify compliance with State determinations issued under §§141.82(f) of this chapter, 141.82(h) of this chapter, 141.83(b)(2) of this chapter, and 141.83(b)(4) of this chapter; (ii) Verify compliance with the requirements related to partial lead service line replacement under §141.84(d) of this chapter and compliance with lead service line replacement schedules under §141.84(e) of this chapter; and (iii) Invalidate tap water lead and copper samples under §141.86(f) of this chapter.	§142.14 (d)(10)			
Records of each system's currently applicable or most recently designated monitoring requirements. If, for the records identified in paragraphs (d)(8)(i) through (d)(8)(xvii) of this section, no change is made to State determinations during a 12-year retention period, the State shall retain the record until a new decision, determination, or designation has been issued.	§142.14 (d)(11)			
§142.15 Reports by States				
		§142.15 (b)(4)(i)	See PDF page 344	
States shall report quarterly, in a format and on a schedule prescribed by the Administrator, the following information related to each system's compliance with the treatment techniques for lead and copper under 40 CFR part 141, subpart I during the preceding calendar quarter. Specifically, States shall report as follows:	§142.15 (c)(4)			
For any reports provided prior to May 15, 2000, States shall report the name and PWS identification number: (A) Each public water system which exceeded the lead and copper action levels and the date upon which the exceedance occurred; (B) Each public water system required to complete the corrosion control evaluation specified in §141.82(c) and the date the State received the results of the evaluations from each system; (C) Each public water system for which the State has designated optimal corrosion control treatment under §141.82(d), the date of the determination, and each system that completed installation of treatment as certified under §141.90(c)(3); (D) Each public water system for which the State has designated optimal water quality parameters under §141.82(f) and the date of the determination; (E) Each public water system which the State has required to install source water treatment under §141.83(b)(2), the date of the determination, and each system that completed installation of treatment as certified under §141.90(d)(2); (F) Each public water system for which the State has specified maximum permissible source water levels under §141.83(b)(4); and (G) Each public water system required to begin replacing lead service lines as specified in §141.84, each public water system for which the State has established a replacement schedule under §141.84(f), and each system reporting compliance with its replacement schedule under §141.90(e)(2).	§142.15 (c)(4)(i)	§142.15 (b)(4)(i)	(i) States shall report the name and PWS identification number: (A) Each public water system which exceeded the lead and copper action levels and the date upon which the exceedance occurred;	
For any reports provided after May 14, 2000 and before January 14, 2002, States may report in accordance with either paragraph (c)(4)(i) or (c)(4)(iii) of this section.	§142.15 (c)(4)(ii)	§142.15 (b)(4)(ii)	(ii) States shall report the PWS identification number of each public water system identified in paragraphs (c)(4)(iii)(A) through (F) of this section.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§142.15 (b)(4)(ii)(A)	(A) For each public water system, regardless of size, all 90th percentile lead levels calculated during each monitoring period specified in § 141.86 of this chapter, and the first and last day of the monitoring period for which the 90th percentile lead level was calculated;	
		§142.15 (b)(4)(ii)(B)	(B) For each public water system (regardless of size), the 90th percentile copper level calculated during each monitoring period in which the system exceeds the copper action level, and the first and last day of each monitoring period in which an exceedance occurred;	
		§142.15 (b)(4)(ii)(C)	(C) For each public water system for which the State has designated optimal water quality parameters under § 141.82(f) of this chapter, or which the State has deemed to have optimized corrosion control under § 141.81(b)(1) or (b)(3) of this chapter, the date of the determination and the paragraph(s) under which the State made its determination, the corrosion control treatment status of the water system, and the water system's optimal water quality parameters;	
		§142.15 (b)(4)(ii)(D)	(D) For each public water system, the number of lead service lines in its distribution system, including service lines of unknown material;	
		§142.15 (b)(4)(ii)(E)	(E) For each public water system required to begin replacing lead service lines after a lead trigger level or action level exceedance, as specified in § 141.84 of this chapter and the date each system must begin replacement; and	
		*****		
For all reports submitted on or after January 14, 2002, States shall report the PWS identification number of each public water system identified in paragraphs (c)(4)(iii)(A) through (F) of this section. (A) For each large and medium-size public water system, all 90th percentile lead levels calculated during each monitoring period specified in §141.86 of this chapter, and the first and last day of the monitoring period for which the 90th percentile lead level was calculated; (B) For each small public water system, the 90th percentile lead level calculated during each monitoring period in which the system exceeds the lead action level, and the first and last day of each monitoring period in which an exceedance occurred; (C) For each public water system (regardless of size), the 90th percentile copper level calculated during each monitoring period in which the system exceeds the copper action level, and the first and last day of each monitoring period in which an exceedance occurred; (D) For each public water system for which the State has designated optimal water quality parameters under §141.82(f) of this chapter, or which the State has deemed to have optimized corrosion control under §141.81(b)(1) or (b)(3) of this chapter, the date of the determination and the paragraph(s) under which the State made its determination; (E) For each public water system required to begin replacing lead service lines as specified in §141.84 of this chapter and the date each system must begin replacement; and	§142.15 (c)(4)(iii)(A) – (E)		~~For all reports submitted on or after January 14, 2002, States shall report the PWS identification number of each public water system identified in paragraphs (c)(4)(iii)(A) through (F) of this section.~~ ~~(A) For each large and medium-size public water system, all 90th percentile lead levels calculated during each monitoring period specified in §141.86 of this chapter, and the first and last day of the monitoring period for which the 90th percentile lead level was calculated;~~ ~~(B) For each small public water system, the 90th percentile lead level calculated during each monitoring period in which the system exceeds the lead action level, and the first and last day of each monitoring period in which an exceedance occurred;~~ ~~(C) For each public water system (regardless of size), the 90th percentile copper level calculated during each monitoring period in which the system exceeds the copper action level, and the first and last day of each monitoring period in which an exceedance occurred;~~ ~~(D) For each public water system for which the State has designated optimal water quality parameters under §141.82(f) of this chapter, or which the State has deemed to have optimized corrosion control under §141.81(b)(1) or (b)(3) of this chapter, the date of the determination and the paragraph(s) under which the State made its determination;~~ ~~(E) For each public water system required to begin replacing lead service lines as specified in §141.84 of this chapter and the date each system must begin replacement; and~~	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
(F) For each public water system that has implemented optimal corrosion control, completed applicable source water treatment requirements pursuant to §141.83 of this chapter and/or completed lead service line replacement requirements pursuant to §141.84 of this chapter, and the date of the State's determination that these requirements have been met. The date reported shall be the latest of the following events: (*1*) The date the State designates optimal water quality parameters under §141.82(f) of this chapter or deems the system to have optimized corrosion control pursuant to §141.81(b)(1) or (b)(3) of this chapter; (*2*) For systems triggered into source water treatment, the date the State designates maximum permissible source water levels under §141.83(b)(4) of this chapter or determines pursuant to §141.83(b)(2) of this chapter that source water treatment is not required; or (*3*) For systems triggered into lead service line replacement, the date the system completes lead service line replacement or becomes eligible to cease lead service line replacement pursuant to §141.84(f) of this chapter.	§142.15 (c)(4)(iii)(F)		~~(F) For each public water system that has implemented optimal corrosion control, completed applicable source water treatment requirements pursuant to §141.83 of this chapter and/or completed lead service line replacement requirements pursuant to §141.84 of this chapter, and the date of the State's determination that these requirements have been met. The date reported shall be the latest of the following events:~~ ~~(*1*) The date the State designates optimal water quality parameters under §141.82(f) of this chapter or deems the system to have optimized corrosion control pursuant to §141.81(b)(1) or (b)(3) of this chapter;~~ ~~(*2*) For systems triggered into source water treatment, the date the State designates maximum permissible source water levels under §141.83(b)(4) of this chapter or determines pursuant to §141.83(b)(2) of this chapter that source water treatment is not required; or~~ ~~(*3*) For systems triggered into lead service line replacement, the date the system completes lead service line replacement or becomes eligible to cease lead service line replacement pursuant to §141.84(f) of this chapter.~~	
§142.16 Special primacy requirements.				
Requirements for States to adopt 40 CFR part 141, subpart I—Control of Lead and Copper. An application for approval of a State program revision which adopts the requirements specified in 40 CFR part 141, subpart I, must contain (in addition to the general primacy requirements enumerated elsewhere in this part, including the requirement that State regulations be at least as stringent as the federal requirements) a description of how the State will accomplish the following program requirements:	§142.16(d)			
(1) Section 141.82—State designation of optimal corrosion control. (i) Sections 141.82(d), 141.82(f), and 141.82(h)—Designating optimal corrosion control treatment methods, optimal water quality parameters, and modifications thereto. (ii) Section 141.82(g)—Designating an alternative approach for aggregating multiple measurements collected during the same day for a water quality parameter at a sampling location, if the State elects to adopt a formula other than the one specified in §141.82(g)(1) of this chapter.	§142.16 (d)(1)			
(2) Sections 141.83(b)(2) and 141.83(b)(4)—Designating source water treatment methods, maximum permissible source water levels for lead and copper and modifications thereto.	§142.16 (d)(2)			
(3) Section 141.90(e)—Verifying compliance with lead service line replacement schedules and completion of all partial lead service line replacement activities	§142.16 (d)(3)			
(4) Section 141.86(d)(4)(iv)(A)—Designating an alternative period for sample collection for community water systems subject to reduced monitoring.	§142.16 (d)(4)			
		§142.16 (d)(5)	(5) Section 141.84 — Establishing lead service line replacement goal rates.	
		§142.16 (d)(6)	(6) Section 141.84 — Designating acceptable methods for determining service line material for the lead service line inventory.	

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
		§142.16 (d)(7)	(7) Section 141.92 — Defining a school or childcare facility and determining any existing State testing program is at least as stringent as the Federal requirements.	
		§142.16 (d)(8)	(8) Section 141.82 —Verifying compliance with "find-and-fix" requirements.	
		§142.16 (d)(9)	(9) Section 141.88 — Reviewing any change in source water or treatment and how this change may impact other National Primary Drinking Water Regulations.	
			(o)(2)(i)(B) Treatment, including corrosion control treatment and water quality parameters as applicable,	
(o) *Requirements for States to adopt 40 CFR part 141, subpart S.* In addition to the general primacy requirements specified elsewhere in this part, including the requirement that State regulations are no less stringent than the Federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subpart S, must contain the information specified in this paragraph (o).	§142.16 (o)			
(2) *State practices or procedures for sanitary surveys.* In addition to the general requirements for sanitary surveys contained in §142.10(b)(2), a primacy application must describe how the State will implement a sanitary survey program that meets the requirements of paragraph (o)(2)(i) of this section. A "sanitary survey," as conducted by the State, includes but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.	§142.16 (o)(2)			
(i) The State must conduct sanitary surveys that address the eight sanitary survey components listed in this section no less frequently than every three years for community water systems, except as provided in paragraph (o)(2)(iii) of this section, and every five years for non-community water systems. The State may conduct more frequent sanitary surveys for any system. The initial sanitary survey for each community water system must be conducted by December 31, 2012, unless the system meets the requirements of paragraph (o)(2)(iii) of this section. The initial sanitary survey for each community water system that meets the requirements of paragraph (o)(2)(iii) of this section and for each non-community water system must be conducted by December 31, 2014. The sanitary survey must include an evaluation of each of the following elements as applicable:	§142.16 (o)(2)(i)			
(B) Treatment,	§142.16 (o)(2)(i)(B)		(o)(2)(i)(B) Treatment, including corrosion control treatment and water quality parameters as applicable,	
§142.19 EPA review of State implementation of national primary drinking water regulations for lead and copper.				
		§142.19(b)	(b) Pursuant to the procedures in this section, the Regional Administrator may review state determinations establishing a goal lead service line replacement rate and may issue an order establishing federal goal rate requirements for a public water system pursuant to § 141.84(b) where the Regional Administrator finds that an alternative goal lead service line replacement rate is feasible.	Insert new text and adjust (re-designate) existing (b)-(f).

Federal Requirement	Federal Citation	Revised Citation	New/Revised Regulation	Difference between STR and LTR Regulation
Subpart G—Identification of Best Technology, Treatment Techniques or Other Means Generally Available				
§142.62 Variances and exemptions from the maximum contaminant levels for organic and inorganic chemicals.				
The State may require a public water system to use bottled water, point-of-use devices, point-of-entry devices or other means as a condition of granting a variance or an exemption from the requirements of §§141.61 (a) and (c) and 141.62, to avoid an unreasonable risk to health. The State may require a public water system to use bottled water and point-of-use devices or other means, *but not point-of-entry devices,* as a condition for granting an exemption from corrosion control treatment requirements for lead and copper in §§141.81 and 141.82 to avoid an unreasonable risk to health. The State may require a public water system to use point-of-entry devices as a condition for granting an exemption from the source water and lead service line replacement requirements for lead and copper under §§141.83 or 141.84 to avoid an unreasonable risk to health.	§142.62(f)			
Public water systems that use bottled water as a condition for receiving a variance or an exemption from the requirements of §§141.61 (a) and (c) and 141.62, or an exemption from the requirements of §§141.81-141.84 must meet the requirements specified in either paragraph (g)(1) or (g)(2) and paragraph (g)(3) of this section:	§142.62(g)			
The Administrator or primacy State must require and approve a monitoring program for bottled water. The public water system must develop and put in place a monitoring program that provides reasonable assurances that the bottled water meets all MCLs. The public water system must monitor a representative sample of the bottled water for all contaminants regulated under §§141.61 (a) and (c) and 141.62 during the first three-month period that it supplies the bottled water to the public, and annually thereafter. Results of the monitoring program shall be provided to the State annually.	§142.62 (g)(1)			
The public water system must receive a certification from the bottled water company that the bottled water supplied has been taken from an “approved source” as defined in 21 CFR 129.3(a); the bottled water company has conducted monitoring in accordance with 21 CFR 129.80(g)(1) through (3); and the bottled water does not exceed any MCLs or quality limits as set out in 21 CFR 165.110, part 110, and part 129. The public water system shall provide the certification to the State the first quarter after it supplies bottled water and annually thereafter. At the State's option a public water system may satisfy the requirements of this subsection if an approved monitoring program is already in place in another State.	§142.62 (g)(2)			
The public water system is fully responsible for the provision of sufficient quantities of bottled water to every person supplied by the public water system via door-to-door bottled water delivery.	§142.62 (g)(3)			

Proposed LCR LTR Requests for Comment (Section VII in Preamble)

Page	Section/Subsection	Request for comment
183	VII. Request for Comment	The EPA is requesting comments upon all aspects of the proposed revisions described in this notice. While all comments relevant to the LCR revisions proposed in this notice will be considered by the EPA, comments on the following issues will be especially helpful to the EPA in developing a final rule. The EPA specifically requests comment on the following issues.
183	General Matters	The EPA is requesting comment on the overall framework for the proposed LCR revisions. Has the EPA developed proposed revisions that address the variability in conditions among the regulated water systems that effect the levels of lead that may be present in drinking water? Do the proposed revisions to the LCR target the appropriate treatment technique actions to prevent known or anticipated adverse health effects to the extent feasible in accordance with the Safe Drinking Water Act (SDWA)?
184	General Matters	The EPA requests comment on the complexity of the regulatory requirements that result from targeting different actions for different types of water systems and challenges States and water systems will encounter.
184	General Matters	The EPA requests comment on ways that the proposed LCR revisions could be simplified and burden, including paperwork burden, could be reduced while still assuring adverse health effects are prevented to the extent feasible.
184	General Matters	The EPA solicits comment on ways it can improve the ability of State or Federal government to enforce this rule.
184	General Matters	The EPA solicits comment on ways it can improve the ability of State or Federal government to assist water systems with compliance.
184	Trigger Level	The EPA requests comment on the proposed trigger level of 10 µg/L and the actions water systems must take if they exceed this trigger level. Does this level represent an appropriate 90th percentile level at which to require systems to initiate progressive actions to reduce drinking water lead levels?
184	Trigger Level	The EPA requests comment on other 90th percentile level thresholds that would be reasonable for water systems to initiate progressive actions to reduce drinking water lead levels.
184	Lead Service Line Requirements	The EPA requests comment on the feasibility of creating initial lead service line inventories by the compliance date, which is three years after publication of the final rule, and if a different frequency (other than annual) would be more appropriate for inventory updates.
185	Lead Service Line Requirements	The EPA requests comment on whether additional requirements or guidance are needed relating to the content or format of inventories.
185	Lead Service Line Requirements	The EPA also requests comment on the actions that system with limited records can take to improve their understanding of the number and location of lead service lines in their water system.

Page	Section/Subsection	Request for comment
185	Lead Service Line Requirements	The EPA request comment on whether small water systems should be exempt from the requirement to prepare a LSLR plan concurrent with their LSL inventory, given that they may opt not to select LSLR as a compliance option if the action level is exceeded.
185	Lead Service Line Requirements	The EPA requests comment on including galvanized pipe in lead service line (LSL) inventories and in goal-based and mandatory lead service line replacement (LSLR) rates under the proposed LCR revisions.
185	Lead Service Line Requirements	The EPA requests comment on the treatment of unknown service lines in the inventory.
185	Lead Service Line Requirements	The EPA requests comment on whether the Agency should require water systems to distribute education materials to homes with unknown service lines to inform them of the potential for their line to be made of lead and the actions they can take to reduce their exposure to drinking water lead.
185	Lead Service Line Requirements	The EPA requests comment on proposed revisions to the lead service line replacement program requirements.
185	Lead Service Line Requirements	The EPA requests comment on the goal-based lead service line requirement for systems that exceed the trigger level. Does the goal based LSLR requirement provide adequate incentives for water systems to achieve meaningful reductions in their lead service line inventory? Does the goal based program enable systems to effectively incorporate LSLR into their infrastructure replacement programs?
186	Lead Service Line Requirements	The EPA requests comment on what criteria must be met for the EPA to establish a federal goal rate for water system under § 142.19.
186	Lead Service Line Requirements	The EPA also requests comment upon the feasibility of replacing a minimum of three percent of the lead service lines a year for the systems that exceed the action level.
186	Lead Service Line Requirements	The EPA requests comment on whether the number of lines required to be replaced should be three percent of the number of lead service lines plus the number of unknown service lines at the time the systems exceeds the action level.
186	Lead Service Line Requirements	The EPA requests comment on the feasibility for a water system to replace its portion of an LSL within 45 days of being notified that a customer has replaced the customer portion of an LSL. Should this time frame be longer? Should this time frame be shorter?
186	Lead Service Line Requirements	The EPA also requests comment on whether such replacement by a water system should be mandatory or voluntary.
186	Lead Service Line Requirements	The EPA requests comment on how water systems that are conducting LSLR can identify and prioritize replacements at the locations that have the highest lead levels and/or the most susceptible populations.
186	Lead Service Line Requirements	The EPA requests comment on whether to require water systems to describe in their LSLR plan, how LSLR will be prioritized or to require a prioritization plan at the time LSLR is compelled.

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186	Lead Service Line Requirements	The EPA is requesting comment on the appropriateness of requiring two years of tap sample monitoring before water systems may stop LSLR. Under this proposal, corrosion control treatment (CCT) or re-optimization of CCT may not immediately reduce lead levels at the tap. The EPA proposes that two years of monitoring would be enough time to evaluate and ensure these measures consistently reduce lead to meet the action level.
187	Lead Service Line Requirements	The EPA requests comment on requiring systems with LSLs to make publicly available the exact address of the LSL in the inventory instead of a location identifier (street, intersection, landmark) as proposed.
187	Lead Service Line Requirements	The EPA request comment on the appropriateness of pitcher filters for risk mitigation after LSLR or LSL disturbances given that the customer would be responsible for operation and maintenance.
187	Corrosion Control Treatment	The EPA is requesting comment on the proposed CCT re-optimization requirements.
187	Corrosion Control Treatment	EPA requests comment upon the potential actions water systems could take to adjust their corrosion control treatment and how they should work with the State to determine if adjustments to the treatment would better optimize corrosion control.
187	Tap Sampling	The EPA is requesting comment on an alternative revision to the LCR's existing tap sample collection method provisions. In promulgating the LCR, the EPA noted "the rule contains other procedures to ensure that excessive lead and/or copper levels would be detected in monitoring by requiring, for example, sampling of the first liter of water from the tap after water has been standing for at least six hours, conditions under which higher than average contaminant levels are likely to occur" (58 FR 26514). The EPA continues to believe that first draw sampling following a 6-hour stagnation period is an effective technique to determine when optimal corrosion control treatment is being maintained. However, the EPA notes that research using sequential tap sample collection techniques on homes with LSLs indicates that a first draw sample may not represent the significant contributions of LSLs (Lytle et al., 2019).
188	Tap Sampling	However, the EPA is requesting comment on whether water systems with lead service lines should be required to collect tap samples that are representative of water that was in contact with lead service lines during the 6-hour stagnation period.
188	Tap Sampling	The EPA requests comment on an alternative tap sampling technique for sampling locations with LSLs.

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188	Tap Sampling	The EPA requests comment on requiring tap samplers to collect the first gallon of water from the tap following the stagnation period (referred to as the fifth liter), then to collect a one-liter sample for analysis. The sampler would be instructed to pour out the gallon container or to use it for other purposes (*e.g.*, watering plants) and to submit the one-liter tap sample for analysis. The EPA finds this approach would be more representative of lead concentrations in service lines (Del Toral, 2013) and would be more likely to identify a greater number of water systems that would be required to take action to address elevated levels of lead.
188	Tap Sampling	The EPA also requests comment on how the EPA could develop tap sample protocols that would allow for collection of a first draw copper sample and a fifth liter lead tap sample during a single tap sample event. The EPA requests data that demonstrate collecting a tap sample liter (i.e., 5th liter) other than a first draw is more representative of water that has been in contact with a lead service line during the six hour stagnation period.
189	Tap Sampling	The EPA requests comment on whether the regulation should specify a minimum tap sampling frequency of once every six months or once per year following the source water change or significant treatment change.
189	Testing in Schools and Child Care Facilities	The EPA requests comment on whether it should revise the rule to require community water systems (CWSs) to offer to collect samples from schools and child care facilities every five years or to collect samples from a school or a child care facility only if requested.
190	Small System Flexibilities	EPA requests comment on whether different flexibilities would be more appropriate for small systems whether defined as water systems serving 10,000 or fewer persons or 3,300 or fewer persons.
190	Public Education and Outreach	The EPA requests comment on whether the Agency should require water systems to distribute education materials to homes with unknown service line types to inform them of the potential for their line to be made of lead and the actions they can take to reduce their exposure to drinking water lead.
190	Public Education and Outreach	The EPA requests comment on the appropriateness of required outreach activities a water system would conduct if they do not meet the goal LSLR rate in response to a trigger level exceedance.
190	Public Education and Outreach	The EPA also requests comments on other actions or additional outreach efforts water systems could take to meet their LSLR goal rate.
190	Public Education and Outreach	The EPA requests comment on the appropriateness, frequency, and content of required outreach to State and local health agencies and whether the requirement should apply only to a subset of the country's community water systems.
190	Economic Analysis	The EPA is soliciting comment on all aspects of the analysis for this rule. The agency offers a fulsome discussion on assumptions, models and related uncertainties in the regulatory impact analysis. In particular, the EPA requests comment on the five drivers of costs identified including rate of LSLR in its economic analysis.

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191	Economic Analysis	EPA requests comments on whether this estimated rate of lead service lines being replaced is appropriate. The EPA also solicits comment on: (1) the existing number of LSLs in PWSs; (2) the number of PWS above the AL or TL under the current and proposed monitoring requirements; (3) the cost of installing and optimizing corrosion control treatment (CCT); (4) the effectiveness of CCT in mitigating lead concentrations; and (5) the cost of lead service line replacement cost of lead service line replacement, cost of CCT, effectiveness of CCT.
191	Economic Analysis	In addition to these cost drivers, the EPA solicits comment on the assumptions regarding labor required to comply with this rule, including labor required to collect and analyze samples.
191	Economic Analysis	In the interim, EPA solicits peer reviewed information on the evidence relevant to quantifying the incremental contribution of blood lead concentrations (especially at BLL < 5 μg/dL) to cardiovascular disease (and associated mortality) relative to strong predictors such as diet, exercise, and genetics that may be useful in future benefits analysis.
191	Economic Analysis	As mentioned in Section VI, and detailed in Appendix F of the EA, the EPA in a secondary analysis has estimated the changes in lead concentrations at non-LSL households that result from changes in CCT. The lead concentration values used in this assessment come from data EPA collected from 15 cities across the United States and Canada (See Chapter 6, section 6,2 of the EA for more detail). The EPA has not found additional studies to corroborate this data. The EPA, therefore, is requesting comment and additional information about the change in lead concentrations that occur in non-LSL households that experience changes in CCT.
192	Recordkeeping	The EPA requests comment on the utility of States maintaining records of water system actions related to find-and-fix.

DPL HAS MOVED TO ONLINE RENEWALS

You can now **RENEW ONLINE**! The enclosed renewal document includes your assigned **AUTHORIZATION CODE** that, together with your **RECORD ID/LICENSE NUMBER** will enable you to complete your license renewal.

ONLINE RENEWAL INSTRUCTIONS

1. To begin the online renewal process, please visit https://elicensing.mass.gov/CitizenAccess which will bring you directly to our ePLACE Portal.

2. Create a portal account or log in to your existing account. New users should select the link titled "**New Users:** Register for an Account" found just below the login section and follow the instructions to create a Portal account. After you have registered for an account, please login with the username and password that you created.

3. After logging in, go to the "Manage My Licenses, Permits & Certificates" tab, and complete the following steps:
   - ☐ Select the "**Link Your Account to Your License**" link under the grey banner titled "Licenses, Permits, Certificates & Other Records."
   - ☐ Select the "Link Your License/Permit/Certificate to Your Account" link.
   - ☐ Click on the circle to select "Link your license / permit / certificate to your portal account."
   - ☐ Select the "Continue" button at the bottom of the page.
   - ☐ Select the proper agency (Division of Professional Licensure (DPL)), and when prompted enter your Record ID/license number (*Example: 1234-CA-CA*) and the Authorization Code (*Example: 1234567899*) provided in the enclosed document. Then select the "Continue" button at the bottom of the page.
   - ☐ After reviewing the submitted information choose "Submit".
4. Once you have successfully linked your account, go back to the "Manage My Licenses, Permits & Certificates" tab and you should now see your license listed, along with a link providing you with the option to renew. Be advised the option to renew will only be present if your license is currently eligible for renewal.

5. In the right column labeled "Action" you will see a link to "Renew" Click that link to begin the online renewal.

6. Step thru the renewal pages, answer all required questions and pay the renewal fee to complete the renewal process.